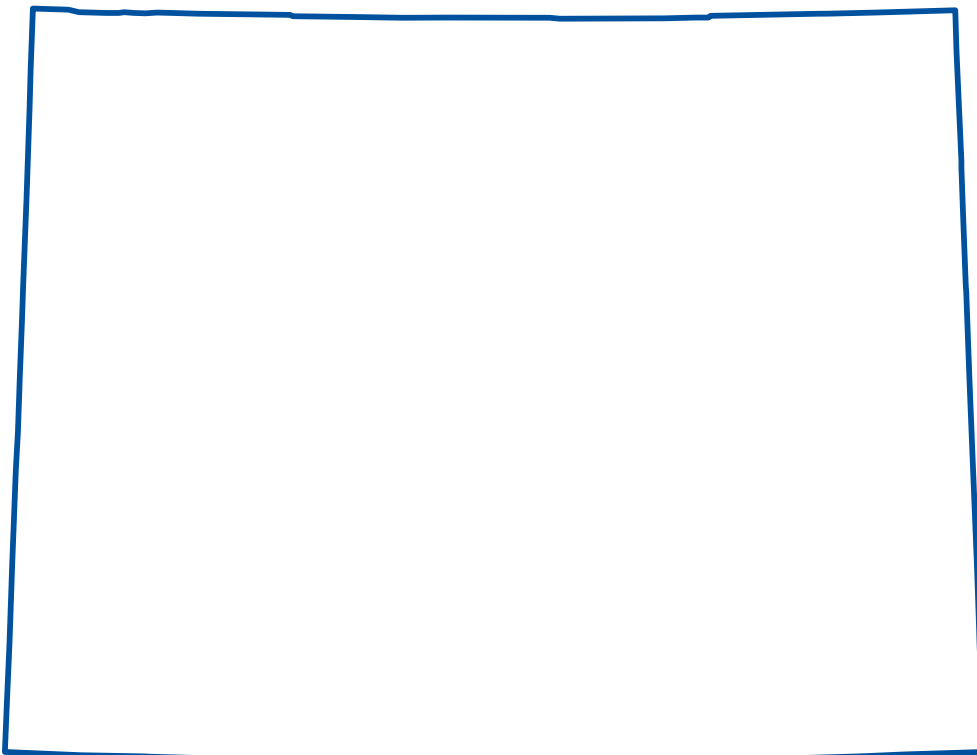


# Water Resources Data Wyoming Water Year 2001

## Volume 1. Surface Water

Water-Data Report WY-01-1



# CALENDAR FOR WATER YEAR 2001

2000

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

2001

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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28	29	30	31				25	26	27	28				25	26	27	28	29	30	31

APRIL							MAY							JUNE						
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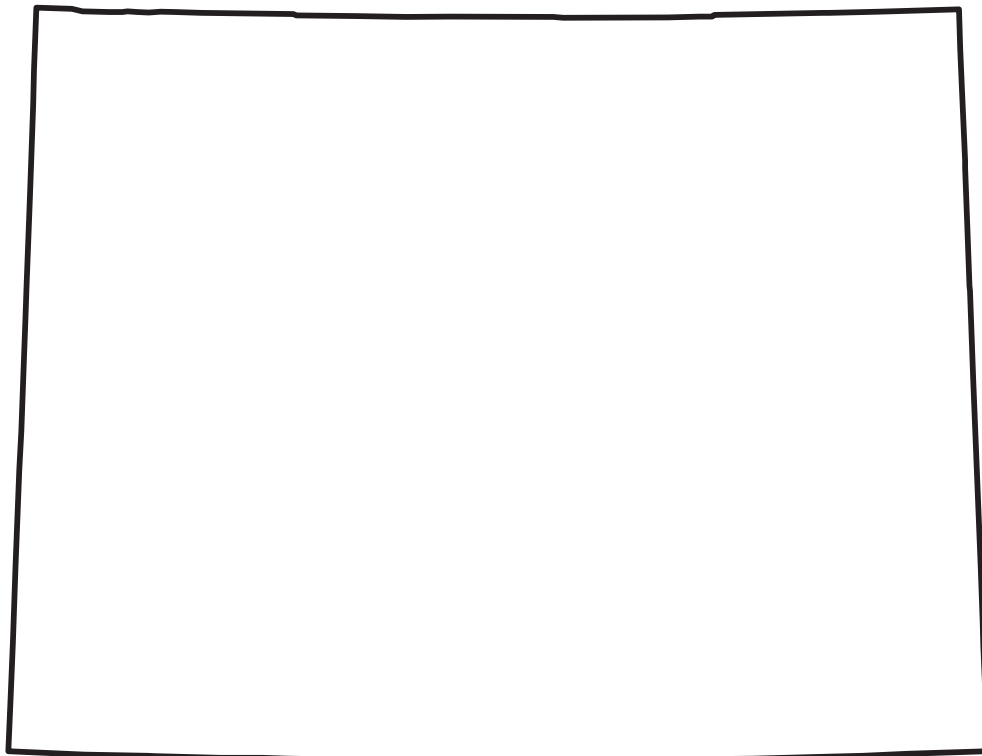
JULY							AUGUST							SEPTEMBER						
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						

# Water Resources Data Wyoming Water Year 2001

## Volume 1. Surface Water

By R.B. Swanson, R.E. Woodruff, G.A. Laidlaw, K.R. Watson, and M.L. Clark

Water-Data Report WY-01-1



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[Letters after station names designate type of data - **Daily tables:** (D) discharge, (C) specific conductance, (S) sediment, (T) temperature, (V) elevation or contents, (O) dissolved oxygen, (P) pH - **Periodic tables:** (c) chemical, (m) microbiological, (s) sediment]

**NOTE.**--Data for NAWQA stations, partial-record stations, and miscellaneous sites are published in separate sections of the data report.

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GREEN RIVER NEAR GREEN RIVER, WY (Dc) .....	09217000	383
GREEN RIVER BELOW GREEN RIVER, WY (c) .....	09217010	386
BLACKS FORK NEAR ROBERTSON, WY (D) .....	09217900	387
EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY (D) .....	09220000	389
BLACKS FORK NEAR LYMAN, WY (cms) .....	09222000	391
HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY (D) .....	09223000	392
HAMS FORK NEAR DIAMONDVILLE, WY (cm) .....	09224050	394
BLACKS FORK NEAR LITTLE AMERICA, WY (Dc) .....	09224700	395
HENRYS FORK NEAR MANILA, UT (D) .....	09229500	398
GREEN RIVER NEAR GLENDALE, UT (D) .....	09234500	400
YAMPA RIVER:		
LITTLE SNAKE RIVER NEAR SLATER, CO (D) .....	09253000	402
BATTLE CREEK:		
WEST FORK BATTLE CREEK:		
HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY (c) .....	09253455	404
WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY (c) .....	09253465	405
SLATER FORK NEAR SLATER, CO (D) .....	09255000	406
LITTLE SNAKE RIVER BELOW BAGGS, WY (cs) .....	09259050	408
<b>GREAT SALT LAKE BASIN</b>		
BEAR RIVER BASIN		
BEAR RIVER NEAR UTAH-WYOMING STATE LINE (D) .....	10011500	409
BEAR RIVER AT EVANSTON, WY (D) .....	10016900	411
BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT (Dcsm) .....	10020100	413
BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT (D) .....	10020300	416
TWIN CREEK AT SAGE, WY (cs) .....	10027000	418
BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY (D) .....	10028500	419
SMITHS FORK NEAR BORDER, WY (D) .....	10032000	421

**GREAT SALT LAKE BASIN**-continued

BEAR RIVER BASIN-continued		
SMITHS FORK AT COKEVILLE, WY (cs) .....	10035000	423
BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY (Dcsm) .....	10038000	424
BEAR RIVER AT BORDER, WY (D) .....	10039500	430

**COLUMBIA RIVER BASIN**

SNAKE RIVER BASIN		
SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY (Dcs) .....	13010065	432
SNAKE RIVER NEAR MORAN, WY (D) .....	13011000	438
PACIFIC CREEK AT MORAN, WY (D) .....	13011500	440
BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY (D) .....	13011900	442
SNAKE RIVER AT MOOSE, WY (Dcs) .....	13013650	444
GROS VENTRE RIVER AT ZENITH, WY (D) .....	13015000	448
FISH CREEK:		
LAKE CREEK:		
GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY (D) .....	13016305	450
FISH CREEK AT WILSON, WY (D) .....	13016450	452
FLAT CREEK:		
CACHE CREEK NEAR JACKSON, WY (D) .....	13018300	454
FLAT CREEK BELOW CACHE CREEK NEAR JACKSON, WY (D) .....	13018350	456
SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY (D) .....	13018750	458
SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D) .....	13022500	460
GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY (D) .....	13023000	462
SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY (Dcsm) .....	13027500	464
HENRYS FORK BASIN		
FALLS RIVER:		
BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY (D) .....	13046680	467

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS

The following surface-water, water-quality, sediment, and biological stations have been operated in and adjacent to Wyoming. The listing includes both discontinued and currently (2001) active stations. Reservoir stations also are included. Records have been collected and published for the period of record, expressed in calendar years, shown for each station. The listing is limited to those stations that have been part of systematic data-collection monitoring networks. Miscellaneous sites are not included. [--, drainage area not determined or no record available]

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN</b>							
<b>MADISON RIVER BASIN</b>							
Firehole River (head of Madison River) near West Yellowstone, Mont .....	06036905	282	1983-95.	--	1983-93.	1988-93.	--
Gibbon River below Canyon Creek, near West Yellowstone, MT .....	06306950	--	--	--	--	2001	--
Gibbon River near West Yellowstone, Mont.....	06037000	118	1913-16;1983-95.	--	1983-93.	1988-93.	--
Gibbon River at Grand Loop Road Bridge at Madison Junction, Yellowstone National Park .....	06037100	126	2001	--	--	2001	--
Madison River near West Yellowstone, Mont.....	06037500	420	1913-73;1983-86;1988-	--	1983-86; 1989-96.	1989-96.	--
<b>GALLATIN RIVER BASIN</b>							
Gallatin (West Gallatin) River near Gallatin Gateway (Bozeman), Mont .....	06043500	825	1889-94;1930-81;1984-	--	2001-	--	--
<b>YELLOWSTONE RIVER BASIN</b>							
Yellowstone Lake at Bridge Bay (Lake Hotel), Yellowstone National Park .....	06186000	1,006	1921a-82a.	--	--	--	--
Yellowstone River at Yellowstone Lake outlet, Yellowstone National Park .....	06186500	1,006	1922-86;1988-	--	--	--	--
Tower Creek at Tower Falls, Yellowstone National Park .....	06187500	50.4	1922-43.	--	--	--	--
Yellowstone River at Tower Junction, Yellowstone National Park, near .....	06187550	1,342	1983-86.	--	--	--	--
Soda Butte Creek at Yellowstone National Park boundary, near Silver Gate, Mont.....	06187915	28.2	1998-	--	1999-	1999-	1999-
Soda Butte Creek near Lamar Ranger Station, Yellowstone National Park .....	06187950	99.0	1988-	--	1988-89.	1988-89.	--
Lamar River near Tower Falls Ranger Station, Yellowstone National Park .....	06188000	660	1922-69;1985-86;1988-	--	1985-86; 1988-92.	1988-92.	--
Blacktail Deer Creek:							
East Fork Blacktail Deer Creek near Mammoth, Yellowstone National Park .....	06188500	10.3	1937-41.	--	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Blacktail Deer Creek near Mammoth, Yellowstone National Park .....	06189000	14.3	1937-45;1988-93.	--	1988-89.	1988-89.	--	
Gardner River:								
Lava Creek:								
Lupine Creek near Mammoth, Yellowstone National Park.....	06190000	4.67	1937-41.	--	--	--	--	
Gardner River above Mammoth Springs outflow near Mammoth, Yellowstone National Park.....	06190370	--	--	--	1988-93.	--	--	
Mammoth Springs outflow at Mammoth, Yellowstone National Park .....	06190415	--	--	--	1988-94.	--	--	
Gardner River at Mammoth (Hotel) (near Mammoth Hot Springs), Yellowstone National Park.....	06190500	200	1922-38.	--	--	--	--	
Gardner River Sinkhole Diversion near Mammoth, Yellowstone National Park .....	06190525	--	--	--	1988-92.	--	--	
Hot River:								
Clematic Creek at Mammoth, Yellowstone National Park.....	06190530	--	--	--	1990-92.	--	--	
Hot River at Mammoth, Yellowstone National Park .	06190540	--	1988-95.	--	1988-94.	--	--	
Gardner River near Mammoth, Yellowstone National Park.....	06191000	202	1938-72;1984-	--	1984-85; 1987-93.	1988-93.	--	
LaDuke (Corwin) Hot Springs near Corwin Springs, Mont .....	06191400	--	--	--	1987-94.	--	--	
Yellowstone River at Corwin Springs (Horr), Mont .....	06191500	2,623	1889-1893;1910-	--	1988-92, 1999-	1985-92, 1999-	1999-	
Clarks Fork Yellowstone River at Montana-Wyoming State line, near Cooke City, Mont .....	06205450	--	--	--	1975-77; 1990-	1975-77.	--	
Clarks Fork Yellowstone River (Clarks Fork) above Squaw Creek, near Painter .....	06205500	194	1945-51.	--	--	--	--	
Crandall Creek:								
Lodgepole Creek at mouth, near Painter.....	06205950	8.51	1989.	--	--	--	--	
Clarks Fork Yellowstone River (Clarks Fork) below Crandall Creek, near Painter.....	06206000	446	1929-32;1949-57.	--	--	--	--	
Sunlight Creek near Painter .....	06206500	135	1929-32;1945-71.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>YELLOWSTONE RIVER BASIN--continued</b>							
Clarks Fork Yellowstone River above Paint Creek, near Clark .....	06206600	--	--	--	1975-77.	1975-77.	--
Clarks Fork Yellowstone River (Clarks Fork) near Clark .....	06207000	912	1918-24.	--	--	--	--
Clarks Fork Yellowstone River (Clarks Fork) near Belfry (at Chance), Mont.....	06207500	1,154	1921-	--	1965-88.	1965;1971; 1984.	--
Big Sand Coulee above State ditch, near Badger Basin .....	06207507	98.3	1973-77.	--	1977.	1973-77.	--
Big Sand Coulee at Wyoming-Montana State line .....	06207510	134	1973-81.	--	1976-81.	1973-81.	--
Silver Tip Creek near Belfry, Mont .....	06207540	88.0	1967-75.	--	--	--	--
Wind River (head of Bighorn River) near Dubois .....	06218500	232	1945-92; 2001-	--	1947-50; 1953; 1965-86.	1970;1980.	1973-82.
Wagon Gulch near Dubois .....	06218700	4.89	--	1961-84.	--	--	--
Warm Spring Creek near Dubois .....	06219000	85.8	1911-12a.	--	1965.	--	--
Horse Creek at Dubois .....	06219500	120	1910-12.	--	--	--	--
Wind River at Dubois .....	06220000	486	1910-12.	--	1948-49.	--	--
East (North) Fork Wind River near Dubois .....	06220500	427	1950-57;1975-97.	--	1975-86; 1990.	1975-86.	--
Wind River above Red Creek, near Dubois .....	06220800	1,073	1990-	--	1986-92; 2001-	2001-	2001-
Red Creek near Dubois .....	06221000	--	1909a.	--	--	--	--
Wind River tributary near Burris .....	06221200	4.71	--	1961-72.	--	--	--
Dinwoody Creek above lakes, near Burris .....	06221400	88.2	1957-78;1988-	--	1988-92.	1970.	--
Dinwoody Creek near Burris (Crowheart, Lenore) ....	06221500	100	1909;1918-30;1950-58.	--	--	--	--
Wind River near Burris .....	06222000	1,236	1946-53.	--	--	--	--
Upper Wind River A Canal at Headworks, near Burris .....	06222100	--	1997-99; 2001-	--	--	--	--
Dry Creek near Burris, (at Crowheart) (near Lenore).	06222500	53.7	1909a;1921-40;1988-	--	1990.	--	--
Dry Creek Canal at headgate, near Burris .....	06222510	--	1989-99;2001	--	--	1990.	--
Wind River near Burris above Crow Creek, near Lenore, WY .....	06222600	--	--	--	2001-	2001-	2001-
Crow Creek near Tipperary.....	06222700	30.2	1962-93.	--	1974-93.	--	--
Meadow Creek near Lenore (near J. K. Ranch Post Office).....	06223000	41.7	1909a;1921-23.	--	--	--	--

Footnotes at end of the table.



DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>YELLOWSTONE RIVER BASIN--continued</b>							
Wind River--continued							
Willow Creek near Crowheart (at J. K. Ranch Post Office) (near Lenore) .....	06223500	55.4	1909;1921-23; 1925-40;1988-	--	1990.	--	--
Sand Draw near Crowheart .....	06223700	12.8	--	1961-77.	--	--	--
Wind River above Bull Lake Creek, near Crowheart ....	06223750	--	--	--	1990-91.	1990-91.	--
Wind River tributary No. 2 near Crowheart.....	06223800	3.16	--	1961-81.	--	--	--
Bull Lake Creek above Bull Lake (Bull Lake Reservoir) .....	06224000	187	1941-53;1966-	--	1974-	2001-	2001-
Bull Lake (Bull Lake Reservoir) near Lenore .....	06224500	b210	1938-a	--	--	--	--
Bull Lake Creek near Lenore.....	06225000	b213	1918-	--	1990-2001-	2001-	2001-
Wind River near Crowheart .....	06225500	1,891	1945-	--	1976;1978; 1987-92.	1970-82; 1990-92.	--
Wyoming Canal near Lenore .....	06226000	--	1941-45;1949-82;1988-	--	1988.	1974-82; 1988.	--
Wind River below Wyoming Canal Diversion near Mortan.....	06226100	--	--	--	2001-	2001-	2001-
Dry Creek:							
Little Dry Creek near Crowheart .....	06226200	10.5	--	1961-81.	--	--	--
Dry Creek near Crowheart .....	06226300	97.9	--	1959; 1961-81.	--	--	--
Pilot Canal:							
Pilot wasteway near Morton.....	06226500	--	1949-53.	--	--	--	--
Pilot Canal near Morton.....	06227000	--	1949-53.	--	1977.	--	--
Wyoming Canal below Pilot diversion, near Morton .	06227500	--	1949-53.	--	--	1975-82.	--
Johnstown Ditch at Headworks, near Kinnear.....	06227596	--	1991-99; 2001	--	--	--	--
Wind River near Kinnear .....	06227600	2,194	1974-79;1991-	--	1985-92; 2001-	1990-92; 2001-	2001-
LeClair Canal near Riverton .....	06227700	--	--	--	--	1976-77.	--
Lefthand Ditch at Headworks, near Riverton .....	06227810	--	1991-99; 2001-	--	--	--	--

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Wind (Big Wind) River at (near) Riverton (near Arapahoe Agency).....	06228000	2,309	1906-8;1911-	--	1947-50; 1965-95; 2001-	1949-51; 1959-65; 1971;1977; 1985-95; 2001-	1973-78; 1986-95; 2001-	
South Fork Little Wind River above Washakie Reservoir, near Fort Washakie.....	06228350	90.3	1976-	--	1976-92.	--	--	
South Fork Little Wind River below Washakie Reservoir, near Fort Washakie.....	06228450	93.5	1988-	--	1990.	--	--	
(South Fork) Little Wind River near Fort Washakie ...	06228500	117	1921-40.	--	--	--	--	
Ray Canal at headworks, near Fort Washakie.....	06228510	--	1989-99; 2001-	--	--	--	--	
North Fork Little Wind River near Fort Washakie..	06228800	112	1988-	--	1990.	--	--	
North Fork Little Wind River at Fort Washakie.....	06229000	128	1921-40.	--	--	--	--	
Little Wind River at Fort Washakie .....	06229500	249	1908-9	--	--	--	--	
Sage Creek above Norkok Meadows Creek, near Fort Washakie.....	06229680	118	1990-95.	--	1990.	--	--	
Norkok Meadows Creek near Fort Washakie.....	06229700	15.4	--	1965-81.	--	--	--	
Sand Draw near Fort Washakie .....	06229800	99	--	1961-81.	--	--	--	
Trout Creek near Fort Washakie .....	06229900	16.1	1990-	1961-68; 1970-84.	1990.	--	--	
Trout Creek at Wind River .....	06230000	33.6	1909.	--	--	--	--	
Mill Creek above Ray Lake outlet canal, near Fort Washakie .....	06230190	15.8	1990-96.	--	1990.	--	--	
Ray Lake near outlet, near Fort Washakie .....	06230300	--	--	--	1960-70.	--	--	
Little Wind River near Arapahoe .....	06230500	618	1950-53.	--	1992.	--	1992.	
Little Wind River tributary near Hudson .....	06230800	298	--	1961-71.	--	--	--	
Little Wind River above Arapahoe (Agency) .....	06231000	660	1906-9;1911-18; 1979-95.	--	1966-92.	--	1973-77; 1989-92.	
Middle (Middle Fork) Popo Agie River (Popo Agie River) near Lander .....	06231500	86.5	1911-12;1918-24.	--	--	--	--	
Middle Popo Agie River below The Sinks, near Lander .....	06231600	87.5	1959-68.	1969-74.	--	1965.	--	
Baldwin Creek below Dickinson Creek, at Lander	06231930	--	--	--	1989-	1989-	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Little Wind River--continued								
Popo Agie River--continued								
Little Popo Agie River--continued								
Government Draw:								
Little Dickinson Creek at Lander (formerly								
Baldwin Creek at Lander) .....	06231950	--	--	--	1981.	--	1981.	
North Popo Agie River near Milford .....	06232000	98.4	1945-63.	--	1990.	--	--	
North (North Fork) Popo Agie River near Lander	06232500	134	1938-53.	--	--	--	--	
Popo Agie River at Hudson Siding, near Lander ....	06232600	--	--	--	1983-	--	1983-89; 2001-	
Little Popo Agie River near Atlantic City.....	06232800	5.99	1957-73.	--	--	--	--	
Little Popo Agie River near Lander .....	06233000	125	1946-	--	--	--	--	
Monument Draw at upper station, near								
Hudson .....	06233340	5.50	--	1965-72.	--	--	--	
Monument Draw at lower station, near								
Hudson .....	06233360	8.38	--	1965-84.	--	--	--	
Coal Mine Draw:								
Coal Mine Draw tributary near Hudson.....	06233440	63	--	1965-72.	--	--	--	
Little Popo Agie River at Hudson .....	06233500	384	1907-9;1911-17; 1938-53.	--	--	--	--	
Popo Agie River at Hudson .....	06233600	--	--	--	1966-69; 1984.	--	--	
Popo Agie River near Arapahoe .....	06233900	796	1979-95.	--	1980-92; 2001-	2001-	1983; 1989; 2001-.	
Little Wind (Popo Agie) River below Arapahoe								
(Agency) .....	06234000	1,464	1906-9;1911-18.	--	--	--	--	
Beaver Creek near Lander.....	06234500	113	1938-41.	--	--	--	--	
South Fork Hall Creek near Lander .....	06234700	3.88	--	1960-72.	--	--	--	
Big Sand Draw:								
Bobcat Draw near Sand Draw .....	06234800	b2.89	--	1969; 1971-81.	--	--	--	

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Muskrat Creek:								
Beaver Creek near Arapahoe .....	06235000	354	1950-53.	--	1951; 1967-81; 1985-92.	1989-92.	--	
Little Wind River (Popo Agie River) near Riverton ...	06235500	1,904	1941-	--	1953-54; 1965-	1959-65; 1971; 1989-93; 2001-	1987; 2001-	
Haymaker Creek near Riverton .....	06235700	9.52	--	1961-64; 1966-73.	--	--	--	
Kirby Draw near Riverton.....	06236000	129	1951-53.	1961-84.	--	--	--	
Wind River above Boysen Reservoir, near Shoshoni... .	06236100	4,390	1990-	--	1973-93; 2001-	1991-	1974-89; 2001-	
Lower Fraser diversion reservoir (on Fraser Draw)	06236500	27.4	1953-67c.	--	--	--	--	
Mahoney Reservoir (on Mahoney Draw) .....	06237000	9.82	1952-57d.	--	--	--	--	
Conant Creek:								
Horseshoe Creek:								
Signor Reservoir (on Signor Draw) .....	06237500	7.15	1952-60d.	--	--	--	--	
Rongis Reservoir (on Logan Draw) .....	06238000	37.0	1954-60d;1961-70c.	--	--	--	--	
Rongis Reservoir Canal .....	06238500	--	1953-67c.	--	--	--	--	
Dry Cheyenne Creek:								
West Fork Dry Cheyenne Creek at upper station, near Riverton .....	06238760	.69	--	1965-84.	--	--	--	
West Fork Dry Cheyenne Creek tributary near Riverton .....	06238780	1.85	--	1965-72.	--	--	--	
West Fork Dry Cheyenne Creek near Riverton....	06238790	3.52	--	1965-70.	--	--	--	
Muskrat Creek near Shoshoni .....	06239000	733	1950-73.	--	--	1950;1961; 1964; 1967-68; 1971-73.	--	
Maverick Springs Draw (head of Fivemile Creek):								
Coal Draw:								
Reservoir No. 9 (on Paintrock Draw)	06239500	.64	1953-60d.	--	--	--	--	
Reservoir No. 8 .....	06240000	1.00	1953-60d.	--	--	--	--	
Reservoir No. 7 .....	06240500	4.57	1952-56d.	--	--	--	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Reservoir No. 10.....	06241000	.13	1954-60d.	--	--	--	--	
Reservoir No. 6.....	06241500	5.07	1954-57d.	--	--	--	--	
Reservoir No. 5.....	06242000	5.14	1954-60d.	--	--	--	--	
Reservoir No. 4.....	06242500	5.77	1954-57d.	--	--	--	--	
Reservoir No. 3.....	06243000	5.84	1952-57d.	--	--	--	--	
Reservoir No. 1.....	06243500	5.91	1954-57d.	--	--	--	--	
Fivemile Creek Reservoir .....	06244000	72.8	1956-70c.	--	--	--	--	
Lower Teapot Reservoir (on Teapot Draw).....	06244200	13.5	1954-65c.	--	--	--	--	
Fivemile Creek above Wyoming Canal, near Pavillion	06244500	118	1949-75;1988-	--	1949-51; 1969; 1974-75; 1987-92.	1949-51; 1960-61; 1964-68; 1970-75; 1989-92.	--	
Fivemile Creek near Pavillion.....	06245000	118	1948-49.	--	--	--	--	
Powerline wasteway near Pavillion.....	06245500	--	1949-50.	--	--	1950.	--	
Pavillion drain near Pavillion.....	06246000	--	1948-50.	--	1988.	1949-50; 1988.	--	
Ocean drain at Ocean Lake outlet, near Pavillion...	06246500	--	1948-53;1978-83.	--	1950-51; 1978-83; 1986;1988.	1950-51.	--	
Ocean drain near Midvale .....	06246800	--	1979-82.	--	--	1979-82.	--	
Ocean drain near Pavillion .....	06247000	--	1948-53.	--	--	1949-50.	--	
Dudley wasteway near Pavillion .....	06247500	--	1949-50.	--	--	--	--	
Kellett drain near Pavillion .....	06248000	--	1948-50.	--	--	1950.	--	
Dewey drain near Pavillion .....	06248500	--	1948-50.	--	--	--	--	
Fivemile 76 drain near Riverton.....	06249000	--	1949-50.	--	--	--	--	
Sand Gulch drain and wasteway near Riverton .....	06249500	--	1949-50.	--	--	--	--	
Fivemile Creek near Riverton .....	06250000	b356	1949-65.	--	1950-51.	1949-51; 1959-61; 1963-65.	--	
Lost Wells Butte drain near Riverton.....	06250500	--	1949-50.	--	--	--	--	
Coleman drain near Shoshoni .....	06251000	--	1948-50.	--	--	1950.	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Sand Gulch near Shoshoni .....	06251500	18.6	1948-53.	--	1988.	1949-50; 1988.	--	
Eagle drain near Shoshoni .....	06252000	--	1948-50.	--	--	--	--	
Lateral P-34.9 wasteway near Shoshoni .....	06252500	--	1949-50.	--	--	--	--	
Fivemile Creek near Shoshoni .....	06253000	b418	1941-42;1948-83;1988-	--	1948-51; 1953; 1965-86; 1988.	1949-51; 1959-61; 1963-68; 1972; 1974-75; 1978-85; 1988.	--	
Lateral P-36.8 wasteway near Shoshoni .....	06253500	--	1949-50.	--	--	--	--	
Poison Creek:								
Graham Draw:								
East Fork Reservoir .....	06254000	.81	1949-60d.	--	--	--	--	
West Fork Reservoir .....	06254500	.38	1947-60d.	--	--	--	--	
Graham Reservoir .....	06255000	3.12	1947-60d.	--	--	--	--	
Dead Man Gulch:								
Dead Man Gulch tributary near Lysite.....	06255160	.54	--	1965-68; 1970-72.	--	--	--	
Dead Man Gulch near Lysite .....	06255190	4.11	--	1965-73.	--	--	--	
Dead Man Gulch near Moneta .....	06255200	4.46	--	1958-69.	--	1966.	--	
Poison Creek tributary near Shoshoni.....	06255300	.39	--	1959-81.	--	--	--	
Poison Creek near Shoshoni .....	06255500	500	1949-53;1955-56.	1961-68.	1951.	1949-51; 1964.	--	
Badwater Creek at Lybyer Ranch, near Lost Cabin....	06256000	131	1948-68.	--	--	--	--	
Badwater Creek at Lost Cabin .....	06256500	166	1945-48.	--	--	--	--	
Alkali Creek:								
E-K Creek:								
E-K Creek tributary near Arminto.....	06256550	.14	--	1960-68.	--	--	--	
Red Creek near Arminto .....	06256600	7.15	--	1963-81.	--	1965.	--	
Badwater Creek at Lysite .....	06256650	415	1965-73.	--	--	1966-68; 1970-73.	--	
Badwater Creek tributary near Lysite .....	06256670	5.86	--	1966-73.	--	--	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River--continued								
Badwater Creek--continued								
South Bridger Creek near Lysite .....	06256700	10.0	--	1960-81.	--	--	--	
Bridger Creek:								
Bridger Creek near Lysite .....	06256800	182	1965-73.	--	--	1966-68; 1970-73.	--	
Dry Creek near Bonneville .....	06256900	52.6	1965-81.	--	1976-81.	1966-68; 1970-81.	--	
Badwater Creek at Bonneville .....	06257000	808	1947-73.	--	--	1949-51; 1960-61; 1963-68; 1970-73.	--	
Muddy Creek:								
Holland Creek:								
Warm Springs Creek near Pavillion .....	06257200	5.44	--	1961-69.	--	--	--	
Shotgun Creek:								
Shotgun Creek tributary near Pavillion .....	06257300	2.57	--	1961-81.	--	--	--	
Muddy Creek near Pavillion .....	06257500	267	1949-73.	--	1949-51; 1988-92.	1949-51; 1961; 1964-68; 1970-72.	--	
Muddy Creek near Shoshoni.....	06258000	332	1949-68;1972-83.	--	1953; 1982-84; 1986;1988.	1949-51; 1960-61; 1964-68; 1982-85; 1988.	--	
Cottonwood Creek drain near Shoshoni .....	06258010	--	--	--	--	1979-82.	--	
Birdseye Creek near Shoshoni .....	06258400	13.2	--	1959-72.	--	--	--	
Cottonwood (Dry Cottonwood) Creek near Bonneville.....	06258500	165	1949-53.	--	1949-50; 1976.	--	--	
Boysen Reservoir .....	06258900	7,700	1951-a	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Wind River below Boysen Reservoir.....	06259000	7,701	1951-	--	1953-54; 1956; 1960-92; 2001-	1979-86; 2001.-	1973-87; 2001-	
Wind River at Wedding of Water, near Thermopolis	06259050	--	--	--	2001-	2001-	2001-	
Bighorn River at (near) Thermopolis.....	06259500	8,020	1900-5;1910-53.	--	1949-51; 1953-54; 1969-70.	1949-53.	--	
South Fork Owl Creek near Anchor .....	06260000	85.5	1932;1939-43;1959-85; 1991-95.	--	1974-85.	1965; 1977-78.	1977-78.	
Middle Fork Owl Creek above Anchor Reservoir ..	06260200	33.6	1959-65.	--	--	--	--	
Anchor Reservoir .....	06260300	131	1960-a	--	--	--	--	
South Fork Owl Creek below Anchor Reservoir .....	06260400	131	1959-	--	1974-86.	--	--	
South Fork Owl Creek above Curtis Ranch, near Thermopolis.....	06260500	144	1943-59.	--	--	--	--	
South Fork Owl Creek at Curtis Ranch, near Thermopolis.....	06261000	149	1931-32;1938-43.	--	--	--	--	
South Fork Owl Creek near Thermopolis (Owl Creek near Embar) .....	06261500	180	1921-22;1929-32.	--	--	--	--	
North Fork Owl Creek near Anchor .....	06262000	54.8	1941-62.	--	--	--	--	
North Fork Owl Creek above Basin Ranch (below Cup Creek), near Anchor .....	06262300	e61	1962-75;1991-95.	--	--	--	--	
North Fork Owl Creek at Crann Ranch, near Thermopolis .....	06262500	94.2	1938-39.	--	--	--	--	
North Fork Owl Creek near Thermopolis .....	06263000	102	1930-32.	--	--	--	--	
Mud Creek near Thermopolis .....	06263500	101	1938-39.	--	--	--	--	
Owl Creek near Thermopolis.....	06264000	478	1910-17;1931-32; 1938-69.	--	1976.	1965.	1975.	
Owl Creek near Lucerne .....	06264500	509	1932-33;1938-53.	--	--	--	--	
Bighorn River at Lucerne .....	06264700	--	--	--	1966-	1990-92.	1978-	
Kirby Creek near Lucerne.....	06265000	199	1941-45.	--	--	--	--	
Sand Draw near Thermopolis .....	06265200	6.33	--	1960-81.	--	--	--	
Cottonwood Creek at High Island Ranch (at county bridge), near Hamilton Dome.....	06265337	81.4	1993-	--	1977-78.	1977-78.	1977-78.	
Cottonwood Creek at State Highway 120, near Hamilton Dome .....	06265410	--	--	--	1977-78.	1977-78.	1977-78.	

Footnotes at end of the table.



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Bighorn River--continued								
Grass Creek above Little Grass Creek, near Grass Creek.....	06265435	--	--	--	1977-78.	1977-78.	1977-78.	
Grass Creek near mouth, near Hamilton Dome .....	06265492	--	--	--	1977-78.	1977-78.	1977-78.	
Cottonwood Creek at Winchester .....	06265500	416	1941-49;1977-78.	--	1977-78.	1965-66; 1977-78.	1977-78.	
Tie Down Gulch near Worland .....	06265600	1.78	--	1961-84.	--	--	--	
Gooseberry Creek at Dickie.....	06265800	95	1957-78.	--	1977-78.	1977-78.	1977-78.	
Gooseberry Creek near Grass Creek.....	06266000	142	1945-57.	--	--	--	--	
Gillies Draw:								
Gillies Draw tributary near Grass Creek .....	06266320	1.30	--	1965-73.	--	--	--	
Gooseberry Creek at State Highway 431, near Grass Creek.....	06266450	--	1977-78.	--	1977-78.	1977-78.	1977-78.	
Murphy Draw near Grass Creek .....	06266460	2.32	--	1965-81.	--	--	--	
Gooseberry Creek near Dickie.....	06266500	289	1938-41.	--	1983.	--	--	
Gooseberry Creek at Neiber (Pulliam) .....	06267000	361	1941-53.	--	--	1965-66.	--	
Bighorn River at Neiber.....	06267050	--	--	--	1965-69; 1976.	--	--	
Nowater Creek:								
East Fork Nowater Creek:								
North Prong East Fork Nowater Creek near Worland .....	06267260	3.77	--	1964-84.	--	--	--	
North Prong East Fork Nowater Creek tributary near Worland .....	06267270	2.11	--	1965-73.	--	--	--	
Denver Jake Reservoir (on unnamed tributary of East Fork) .....	06267300	--	1958-67f.	--	--	--	--	
East Fork Nowater Creek near Colter .....	06267400	149	1971-91.	--	1977-81.	1977-81.	--	
Fifteenmile Creek:								
Red Spires Reservoir (on Rock Waterhole Creek)	06267500	5.24	1954-59d;1960-67c.	--	--	--	--	
Middle Fork Fifteenmile Creek near Worland .....	06267900	--	--	--	1978-82.	1978-82.	1978-82.	
Big Gin Reservoir (on unnamed tributary) .....	06268000	.94	1954-59d;1960-67c.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Bighorn River--continued								
Fifteenmile Creek near Worland.....	06268500	518	1951-72;1978-86.	1973-78.	1965; 1978-81; 1983-86; 1989-92.	1949-51; 1959-61; 1963-68; 1970-72; 1978-86; 1989-92.	1978-81.	
Bighorn River at Worland.....	06268600	10,810	1965-69.	--	1964-86.	1965-68.		
Slick Creek near Worland .....	06268640	--	--	--	1981-86.	--	--	
Bighorn River near Manderson.....	06269000	11,020	1949-53;1955-56.	--	1950-51; 1966-71.	1949-51.	--	
Bighorn River at Manderson.....	06269500	11,048	1941-49.	--	1976.	--	--	
Nowood River:								
Spring Creek near Ten Sleep.....	06269700	57.9	--	1961-74.	--	1967.	--	
Nowood River (Creek) tributary near Ten Sleep....	06269750	.42	--	1960-81.	--	--	--	
Nowood River (Creek) near Ten Sleep .....	06270000	803	1938-43;1950-55; 1972-92.	--	1967-86.	1971-82.	--	
Tensleep Creek:								
Leigh Creek near Ten Sleep .....	06270200	2.54	--	1961-74.	--	--	--	
Canyon Creek:								
Canyon Creek tributary near Ten Sleep.....	06270300	.52	--	1961-74.	--	--	--	
Canyon Creek below Cooks Canyon, near Ten Sleep.....	06270450	72	1969-71.	--	1969-71.	1969-71.	--	
Canyon Creek near Ten Sleep .....	06270500	86.1	1939-44.	--	--	--	--	
Tensleep Creek near Ten Sleep .....	06271000	247	1910-12;1914-24; 1943-72.	--	1967.	--	--	
Brokenback Creek near Ten Sleep .....	06271200	55.0	--	1961-70.	--	--	--	
Paintrock Creek below Lake Solitude.....	06271500	16.0	1946-53.	--	--	--	--	
Paintrock Creek at Longview ranger station, near Hyattville.....	06272000	79.9	1911-12a.	--	--	--	--	
Paintrock Creek near Hyattville.....	06272500	164	1920-27;1941-53.	--	1951.	--	--	
Medicine Lodge Creek near Hyattville .....	06273000	86.8	1942-73.	--	1951;1968.	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>YELLOWSTONE RIVER BASIN--continued</b>							
Bighorn River--continued							
Nowood River--continued							
Paint Rock Creek near mouth (near Bonanza), below Hyattville .....	06273500	376	1910-13;1915-22.	--	1951-53; 1967-84.	--	--
Nowood River (Creek) at Bonanza .....	06274000	1,730	1910-28.	--	--	--	--
Sand Creek:							
East Fork Sand Creek near Worland .....	06274100	19.1	--	1960-71.	--	--	--
Nowood River tributary No. 2 near Basin.....	06274190	1.51	--	1965-84.	--	--	--
Nowood River tributary No. 2 near Manderson.....	06274200	1.59	--	1961-71.	1978.	1967.	--
Nowood River at Manderson .....	06274220	e2,000	--	--	1965-86.	1950; 1965-67.	--
Elk Creek near Basin .....	06274250	96.9	--	1959-81.	--	1967.	--
Bighorn River at Basin .....	06274300	13,223	1983-	--	1983-	1989-	1983-
Greybull River near Pitchfork .....	06274500	282	1946-49;1951-71.	--	--	--	--
Wood River near Kirwin .....	06274800	7.66	1970-75.	--	--	1975.	--
Wood River at Kirwin .....	06274810	11.4	1970-78.	--	--	1975.	--
Wood River at Sunshine .....	06275000	e194	1945-92.	--	--	1975.	--
Wood River near Meeteetse .....	06275500	211	1910-12;1914-17; 1929-49.	--	--	--	--
Greybull River near Meeteetse .....	06276000	659	1910-12;1915-16;1920.	--	--	--	--
Greybull River at Meeteetse .....	06276500	681	1897;1903;1920-	--	1996-	1975. 1996-	1996-
Bench Canal near Burlington.....	06277000	--	1930-38.	--	--	--	--
Greybull River near Basin.....	06277500	1,115	1930-73.	--	1951-53; 1965-92.	1950; 1965-66; 1972; 1989-92.	--
Dry Creek:							
Twentyfour Mile Creek near Emblem .....	06277700	12.8	--	1960-81.	--	--	--
Dry Creek tributary near Emblem.....	06277750	.65	--	1960-68; 1970-81.	--	--	--
Dry Creek near Greybull.....	06277950	432	1979-81.	--	1979-81.	1979-80.	1979-81.

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Bighorn River--continued								
Dry Creek at Greybull.....	06278000	433	1951-53;1955-60.	--	1950-51; 1957-60; 1965; 1979-80.	1949-51; 1959-60; 1979-80.	1979-80.	
Shell Creek above Shell (Creek) Reservoir .....	06278300	23.1	1956-	--	--	--	--	
Granite Creek near Shell Creek ranger station, near Shell (formerly Granite Creek near Shell ranger station, near Shell) .....	06278400	11.1	--	1961-74.	--	--	--	
Shell Creek near Shell.....	06278500	145	1940-	--	1951;1976; 1982.	1967.	--	
Shell Creek at Shell .....	06279000	256	1911-23.	--	--	--	1973-74.	
Red Gulch near Shell .....	06279020	47.8	--	1967; 1970-81.	--	--	--	
Shell Creek at Porter Gulch, near Greybull .....	06279050	--	--	--	1983-89.	--	1989-90.	
Shell Creek near Greybull.....	06279090	e560	--	--	1951; 1965-86.	1965-67.	1973-78.	
Bighorn River at Kane .....	06279500	15,765	1928-	--	1947-53; 1955-57; 1960-97, 1999-	1949-51; 1959-61; 1964; 1969-92, 1999-2001.	1972-81; 1984-89, 1999-	
Willow Creek near Kane.....	06279700	14.0	--	1961-75.	--	--	--	
North Fork Shoshone River:								
Jones Creek at mouth, near Pahaska .....	06279790	24.8	1989-93.	--	1989-93.	1989-93.	--	
Crow Creek at mouth, near Pahaska .....	06279795	19.1	1989-93;2001.	--	1989-93; 2001-	1989-93; 2001-	--	
North Fork Shoshone River at Pahaska .....	06279800	108	1989-90.	--	--	--	--	
Middle Creek at East Entrance, Yellowstone National Park.....	06279850	32.6	1981-84.	--	1968-70.	--	--	
North Fork Shoshone River at Wapiti.....	06279940	669	1990-	--	1989-90.	--	1989-90.	
Trout Creek near Wapiti.....	06279950	49.4	--	1961-74.	--	--	--	
North Fork Shoshone River near Wapiti.....	06280000	775	1921-26;1979-89.	--	1981-86.	--	--	
South Fork Shoshone River near Valley .....	06280300	297	1956-	--	1984.	1958-64.	--	
South Fork Shoshone River (Shoshone River) near Ishawooa .....	06280500	541	1915-24.	--	--	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Bighorn River--continued								
Shoshone River--continued								
South Fork Shoshone River (Shoshone River) above Buffalo Bill Reservoir (at Marquette)..  Diamond Creek near mouth, near Cody..... Buffalo Bill (Shoshone) Reservoir near Cody ..... Shoshone River above Demaris Springs, near Cody .. Shoshone River below Buffalo Bill (Shoshone) Reservoir.....  Shoshone River at (near) Cody ..... Cottonwood Creek: Cottonwood Creek tributary near Cody ..... Shoshone River above Dry Creek, near Cody ..... Shoshone River at Corbett Dam ..... Garland Canal (Corbett Tunnel) at Corbett Dam.... Shoshone River above Willwood Dam, near Willwood ..... Shoshone River at Willwood Dam..... Willwood Canal near Ralston ..... Shoshone River below Willwood Dam, near Ralston..  Shoshone River at Willwood ..... Roan Wash near Garland..... Shoshone River near Garland .....  Bitter Creek below sewage lagoon, near Powell..... Bitter Creek near Garland .....  Whistle Creek near Garland.....	06281000  06281400 06281500 06281700 06282000  06282500 06282700 06282900 06283000 06283500 06283800 06284000 06284005 06284010  06284200 06284380 06284400  06284450 06284500  06284800	585  7.34 1,498 -- 1,538  1,603 .76 -- 1,793 -- 1,830 1,833 -- --  1,980 -- 2,036  -- 80.5  101	1903;1905-8;1921-26; 1973- 1980-92. 1909- -- 1921-  1902-9. -- 1961-73. -- -- 1908-25. 1909-20;1922-26. 1979-82. 1925-26. -- --  1974-79. -- 1958-79.  -- 1951-53;1958-61; 1969-87.  1958-60;1968-87.	--  -- -- --  --  -- -- -- -- -- -- -- --  -- -- --  -- --  --	1982-92.  -- -- 1987- 1947-49; 1964-86.  -- -- 1974-89. -- -- -- -- 1979-82. -- -- 1981-83. 1972; 1981-83.  1976. 1985-92. 1958-59; 1967-71; 1974-92. 1981-92. 1950-53; 1958-60 1969- 1959-60; 1969-87.	--  -- 1989. -- --  -- -- -- -- -- 1974-89. -- -- -- 1981-83. 1973-78; 1984-89; 1993-		

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## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Bighorn River--continued								
Shoshone River at Byron .....	06285000	2,345	1929-66.	--	1964-66; 1976.	1950.	--	
Shoshone River near Lovell .....	06285100	e2,350	1966-	--	1966-97; 2001-	1971-82; 1990-92; 2001-	1978-81; 1987-89; 2001-	
Sage Creek at Sidon Canal, near Deaver .....	06285400	341	1958-60;1968-87.	--	1958-60; 1969-87.	--	--	
Sage Creek near Lovell .....	06285500	381	1951-60.	--	1965;1967; 1969-71.	--	--	
Shoshone River at Lovell.....	06286000	2,832	1897-98;1899a.	--	1999-	--	--	
Shoshone River at Kane.....	06286200	2,989	1957-58.	--	1958-68; 1976-89, 1999.	1959-61; 1964, 1999.	1982-89, 1999.	
Bighorn River near Lovell .....	06286250	e18,900	1964-66.	--	--	--	--	
Crooked Creek:								
Big Coulee near Lovell .....	06286258	30.1	1970-78.	--	--	1970-74; 1976-77.	--	
Crooked Creek near Lovell.....	06286260	e119	1964-67.	--	--	--	--	
Porcupine Creek near Lovell. ....	06286270	e135	1964-67.	--	--	--	--	
Bighorn Lake (Yellowtail Reservoir) near St. Xavier, Mont .....	06286400	19,626	1965-	--	--	--	--	
Bighorn River near St. Xavier, Mont.....	06287000	19,667	1934-	--	1966-81.	--	--	
Little Bighorn River below Dayton Gulch, near Burgess Junction.....	06288600	15.9	1982-87.	--	--	--	--	
Dry Fork below Lick Creek, near Burgess Junction .....	06288700	54.1	1982-87;1992-95.	--	--	--	--	
Little Bighorn River near Parkman.....	06288960	137	1969-72.	--	--	--	--	
Elkhorn Creek above Fuller Ranch Ditch, near Parkman .....	06288975	4.58	1982-87.	--	--	--	--	
West Fork Little Bighorn River near Parkman.....	06288990	38.6	1969-72;1982-87.	--	--	--	--	
Little Bighorn (Little Horn) River at State line, near Wyola, Mont .....	06289000	193	1939-	--	1992-	1992-	1992-	
Powers Upper Ditch (Spring Creek):								
Red Canyon Creek near Parkman .....	06289100	3.20	1983-90.	--	--	--	--	
Little Bighorn (Little Horn) River near Wyola, Mont .....	06289500	251	1911-24.	--	--	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>YELLOWSTONE RIVER BASIN--continued</b>							
Bighorn River--continued							
Little Bighorn River--continued							
Pass Creek:							
West Pass Creek near Parkman .....	06289600	15.4	1982-	--	--	--	--
East Pass Creek near Parkman .....	06289800	11.6	1974-76.	--	--	--	--
East Pass Creek near Dayton.....	06289820	21.7	1982-	--	--	--	--
Twin Creek near Parkman .....	06289870	27.0	1982-90.	--	--	--	--
Pass Creek near Wyola, Mont .....	06290000	111	1935-56.	--	--	--	--
Little Bighorn (Little Horn) River below Pass Creek, near Wyola, Mont .....	06290500	428	1939-75.	--	--	--	--
Lodge Grass Creek at State line, near Wyola, Mont	06291200	16.7	1982-89.	--	--	--	--
North Tongue River:							
Hideout Creek near Dayton .....	06296400	2.89	--	1961-67.	--	--	--
North (Fork) Tongue River near Dayton .....	06296500	32.4	1945-57.	--	--	--	--
Big Willow Creek near Dayton.....	06296700	7.08	--	1961-73.	--	--	--
South (Fork) Tongue River near Dayton.....	06297000	85	1945-72.	--	--	--	--
Tongue River at Tongue Canyon Campground, near Dayton .....	06297480	202	1974-79.	--	--	--	--
Highland ditch near Dayton .....	06297500	--	1919-23;1940-	--	--	--	--
Tongue River near Dayton .....	06298000	204	1918-29;1940-	--	1966-81; 1987-88, 1999-2001.	1999-2001.	1973-77; 1980, 1999-2001.
Little Tongue River at Steamboat Point, near Dayton	06298480	11.4	1974-76.	--	--	--	--
Little Tongue River above South Fork Little Tongue River, near Dayton. ....	06298490	14.1	1975-76.	--	--	--	--
Little Tongue River near Dayton .....	06298500	25.1	1951-53;1955-74.	--	1971.	--	--
Tongue River at Dayton.....	06299000	259	1903.	--	--	--	--
Wolf Creek below Alden Creek, near Wolf .....	06299480	32.8	1974-76.	--	--	--	--
Wolf Creek above Red Canyon Creek, at Wolf .....	06299490	33.8	1974-76.	--	--	--	--
Wolf Creek at Wolf .....	06299500	37.8	1945-	--	1985.	--	--
Slater Creek near Monarch .....	06299900	18.0	--	1967-81.	--	1967.	--
Tongue River at Monarch .....	06299980	--	--	--	1974-80; 1982-83.	1976-77.	1976-80; 1982-83.

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Tongue River at Carneyville .....	06300000	495	1911-13;1915-17.	--	--	--	--	
East Fork Big Goose (East Goose) Creek near Big Horn.....	06300500	20.1	1953-	--	--	--	--	
Cross Creek above Big Horn Reservoir, near Big Horn .....	06300900	9.29	1960-71.	--	--	--	--	
Cross Creek near Big Horn .....	06301000	9.63	1953-60.	--	--	--	--	
West Fork Big Goose Creek:								
Coney Creek above Twin Lakes, near Big Horn..	06301480	3.41	1990-	--	--	--	--	
Lost Lake Creek near Big Horn .....	06301485	2.14	1990-93.	--	--	--	--	
Snail Creek near Big Horn .....	06301490	1.36	1990-93.	--	--	--	--	
Coney Creek below Twin Lakes, near Big Horn..	06301495	8.07	1990-94;1995-	--	--	--	--	
West Fork Big Goose (West Goose) Creek near Big Horn .....	06301500	24.4	1953-	--	--	--	--	
Big Goose (Goose) Creek above PK Ditch, in canyon,near Sheridan, WY	06301850		2001-					
Big Goose Creek near Sheridan.....	06302000	120	1929-2001.	--	1987-89.	1989-92.	1989-99.	
Big Goose Creek above Park Creek, near Sheridan	06302200	--	1999-2000	--	1999-2000.	--	1999-2000.	
Goose Creek at Sheridan.....	06302500	182	1909-13;1915-16.	--	--	--	--	
Little Goose Creek:								
Willow Creek near Big Horn .....	06303000	2.99	1953-55.	--	--	--	--	
Little Goose Creek in canyon, near Big Horn.....	06303500	51.6	1941-	--	--	--	--	
Little Goose Creek above Davis Creek, near Big Horn	06303700	--	1999-2000.	--	--	--	--	
Little Goose Creek near Big Horn .....	06304000	71	1919-21.	--	--	--	--	
Little Goose Creek at Sheridan .....	06304500	159	1896-97;1911-12.	--	1979-	1990-92.	1979-	
Goose (Big Goose) Creek below Little Goose Creek, at Sheridan .....	06305000	341	1895;1896-97.	--	--	--	--	
Goose Creek below Sheridan.....	06305500	392	1941-84.	--	1959-64; 1967-	1971-82; 1989-92.	1973-	
Goose Creek near Acme .....	06305700	411	1984-	--	1983-89.	--	1983-87.	
Tongue River near Acme .....	06306000	894	1938-57.	--	--	--	--	
Squirrel Creek near Decker, Mont .....	06306100	33.6	1975-85.	--	1975-85.	--	--	
Prairie Dog Creek near Acme .....	06306250	358	1970-79; 2000-	--	1976-92; 2000-	1976-77.	1976-77.	

Footnotes at end of the table.



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Middle Fork Powder River--continued								
Tongue River at State line, near Decker, Mont.....	06306300	1,477	1960-	--	1965-	1976-77; 1979-83; 2000-	1973-89.	
Deer Creek near Decker, Mont .....	06306800	38.3	--	--	1975-77.	1975-76.	--	
Middle Fork Powder River near Barnum.....	06309200	45.2	1961-	--	--	--	--	
Buffalo Creek above North Fork Buffalo Creek, near Arminto.....	06309260	8.80	1974-79.	--	--	--	--	
North Fork Buffalo Creek near Arminto.....	06309270	8.10	1974-79.	--	--	--	--	
Buffalo Creek below North Fork Buffalo Creek, near Arminto.....	06309280	18.6	1974-79.	--	--	--	--	
Beaver Creek below Bayer Creek, near Barnum .....	06309450	10.9	1974-89.	--	--	--	--	
Beaver Creek above White Panther Ditch, near Barnum .....	06309460	24.2	1974-89.	--	--	--	--	
Middle Fork Powder River above Kaycee .....	06309500	e450	1949-70;1984-92.	--	1949; 1952-54; 1984-92.	1966-68; 1970.	1984-92.	
Red Fork near Barnum.....	06310000	e142	1929-32;1950-53.	--	1988-89.	--	--	
Middle Fork Powder River at Kaycee .....	06310500	647	1911-12;1929-32.	--	1977.	--	--	
North Fork Powder River near Hazelton .....	06311000	24.5	1946-	--	--	--	--	
North Fork Powder River below Bull Creek, near Hazelton.....	06311060	32.3	1974-92.	--	1970-71.	--	--	
North Fork Powder River below Pass Creek, near Mayoworth.....	06311400	100	1973-	--	--	--	--	
North Fork Powder River near Mayoworth .....	06311500	106	1940-73.	--	1971.	--	--	
North Fork Powder River near Kaycee .....	06312000	244	1911;1929-32.	--	1988-89.	--	--	
Powder River near Kaycee.....	06312500	e980	1933-35;1938-71.	--	1946; 1949-50; 1952-54; 1968-91.	--	1973-89.	
South Fork Powder River near Powder River .....	06312700	262	--	1961-84.	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Powder River--continued								
Cottonwood Creek:								
North Fork Cottonwood Creek:								
Sanchez Creek above reservoir, near Arminto	06312795	5.53	--	1970-81.	--	--	--	
Sanchez Creek near Arminto	06312800	5.95	--	1961-76.	--	--	--	
Dead Horse Creek:								
Dead Horse Creek tributary near Midwest.....	06312910	1.53	--	1965-72.	--	--	--	
Dead Horse Creek tributary No. 2 near Midwest.	06312920	1.34	--	1965-72.	--	--	--	
South Fork Powder River near Kaycee.....	06313000	e1,150	1911;1938-40; 1950-69; 1978-80; 1983-84.	--	1949; 1951-53; 1968-81; 1983-89; 1992.	1950-51; 1983-84; 1986-87.	1975-80.	
Salt Creek:								
Bobcat Creek near Edgerton .....	06313020	8.29	--	1965-81.	--	--	--	
Coopers Draw near Edgerton .....	06313030	1.11	--	1965-73.	--	--	--	
Seven L Creek near Edgerton .....	06313040	7.10	--	1965-73.	--	--	--	
Teapot Creek:								
East Teapot Creek near Edgerton.....	06313050	5.44	--	1965-72; 1974-79.	--	--	--	
Coal Draw near Midwest .....	06313100	11.4	--	1961-84.	--	--	--	
Dugout Creek:								
Dugout Creek tributary near Midwest.....	06313180	b.8	1975-83.	1965-74.	--	1982-83.	--	
Hay Draw near Midwest .....	06313200	1.60	--	1958-70.	--	--	--	
Salt Creek near Sussex.....	06313400	769	1976-81;1982-93.	--	1968-81 1983-	1975-81; 1983-87.	1976-77; 1980.	
North Spring Draw near Sussex .....	06313450	5.21	--	1980-81.	--	--	--	
Powder River at Sussex .....	06313500	e3,090	1938-40;1950-57; 1977-84; 1985-98.	--	1967-68 1976-	1967; 1976-87.	1976-81.	
Burger (Bugher) Draw near Buffalo .....	06313600	4.57	--	1961-71.	--	--	--	
Powder River below Burger (Bugher) Draw, near Buffalo, WY .....	06313605	--	--	--	2001	--	--	
Van Houten Draw near Buffalo.....	06313630	10.8	--	1971-81.	--	--	--	
Powder River above Dead Horse Creek, near Buffalo (formerly 441252106090801) .....	06313665	--	--	--	1978; 1988-89.	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Powder River--continued								
Dead Horse Creek near Buffalo .....	06313700	151	1971-90; 2000-01.	1958-71.	1976; 1980-81; 1989; 2000-	1976.	1976; 1978.	
North Fork Crazy Woman Creek:								
Caribou Creek near Buffalo, WY	06313900	5.08	--	1961-74.	--	--	--	
North Fork Crazy Woman Creek below Pole Creek, near Buffalo .....	06313950	43.4	1973-84.	--	--	--	--	
North Fork Crazy Woman Creek near Buffalo .....	06314000	44.9	1942-49;1973-84.	--	--	--	--	
North Fork Crazy Woman Creek below Spring Draw, near Buffalo .....	06314500	51.7	1949-79.	--	--	--	--	
North Fork Crazy Woman Creek near Greub .....	06315000	174	1950-68.	--	--	1966-68.	1978.	
Middle Fork Crazy Woman Creek:								
Poison Creek below Tetley Spring, near Mayoworth .....	06315480	19.0	1974-76.	--	--	--	--	
Poison Creek near Mayoworth.....	06315490	24.7	1974-76.	--	--	--	--	
Middle Fork Crazy Woman Creek near Greub .....	06315500	82.7	1942-72.	--	--	--	1983.	
Crazy Woman Creek near Buffalo .....	06316000	464	1929-32.	--	--	--	1976-81	
Crazy Woman Creek at upper station, near Arvada....	06316400	e945	1963-70;1977-81.	--	1950; 1967-	1950; 1966-67; 1976-81; 1990-	1976-81.	
Headgate Draw at upper station, near Buffalo .....	06316480	3.1	--	1965-73.	--	--	--	
Headgate Draw at lower station, near Buffalo .....	06316490	e2.6	--	1965-73.	--	--	--	
Crazy Woman Creek near Arvada .....	06316500	956	1939-43;1950-64.	--	--	--	--	
Coal Draw near Buffalo (formerly Powder River tributary near Buffalo) .....	06316700	1.64	--	1965-84.	--	--	--	
Powder River at Arvada.....	06317000	e6,050	1919-	--	1946; 1948-53; 1955;1967-	1968; 1970-79; 1983-84; 1986-87.	1972-82.	
Wild Horse Creek at Arvada .....	06317020		2000-		2000-			
Spotted Horse Creek:								
Spotted Horse Creek tributary near Spotted Horse.	06317050	3.98	--	1961-81.	--	--	--	
Powder River near Arvada.....	06317100	e6,580	1915-19.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Powder River--continued								
Clear Creek:								
Sourdough Creek near Buffalo .....	06317300	5.80	1985-90.	--	--	--	--	
Little Sourdough Creek near Buffalo .....	06317340	4.53	1985-88.	--	--	--	--	
North Fork Clear Creek near Buffalo.....	06317500	29.0	1949-68.	--	--	--	--	
Clear Creek at Camp Comfort, near Buffalo .....	06318000	e110	1911-12a.	--	--	--	--	
Clear Creek near (at) Buffalo, WY	06318500	120	1894;1896-99;1917-27; 1938-92.	--	1977-78.	1977-78.	1976-78.	
Clear Creek at Buffalo .....	06319000	e130	1902a;1903-4;1911-12.	--	--	--	--	
Bull Creek:								
Sand Creek near Buffalo .....	06319100	10.8	--	1969-84.	--	--	--	
South Rock Creek (head of Rock Creek) at forest boundary, near Buffalo .....	06319470	40.3	1974-76.	--	--	--	--	
South Rock Creek above Red Canyon, near Buffalo .....	06319480	40.5	1974-76.	--	--	--	--	
South Fork Rock Creek near Buffalo.....	06319500	43.8	1941-43;1950-53.	--	--	--	--	
Rock Creek near Buffalo.....	06320000	60.0	1941-	--	1978.	--	--	
Clear Creek below Rock Creek, near Buffalo.....	06320200	322	1971-81.	--	1975-91.	1975-81.	1976-89.	
Clear Creek near Kumer Draw, near Buffalo.....	06320210	--	--	--	1993-	--	1993-	
Clear Creek at Ucross .....	06320400	409	1976-81.	--	1975-81; 1983-92.	1975-81.	1976; 1978.	
South Piney Creek (head of Piney Creek) at Willow Park .....								
South Piney Creek near Story .....	06320500	33.6	1945-57;1959-	--	--	--	--	
Mead-Coffeen ditch above fish hatchery, near Story .....	06321000	69.4	1951-80.	--	--	--	--	
Mead-Coffeen ditch below fish hatchery, near Story .....	06321020	--	1974-79.	--	--	--	--	
South Piney Creek below Mead-Coffeen ditch, near Story .....	06321040	--	1974-79.	--	--	--	--	
North Piney Creek near Story .....	06321100	69.5	1974-79.	--	--	--	--	
Spring Creek near Story .....	06321500	36.8	1951-82.	--	1976-77.	1976-78.	1976.	
Cruetz ditch near Story .....	06321800	--	1974-79.	--	--	--	--	
Prairie Dog ditch near Story .....	06322000	--	1903a.	--	--	--	--	
	06322500	--	1903a.	--	--	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>YELLOWSTONE RIVER BASIN--continued</b>								
Powder River--continued								
Clear Creek conintued:								
Piney Creek at Kearney.....	06323000	118	1902-6;1910-17; 1919-23;1940-	--	1975-78.	1976-78.	1975-76; 1978.	
Piney Creek at Ucross .....	06323500	267	1917-23;1950-82.	--	1975-92.	1976-78.	1975-80.	
Clear Creek near Arvada.....	06324000	e1,110	1915-19;1928-29; 1939-82.	--	1949-54; 1966-92; 2001.	1966-67; 1975-83.	1975-80.	
Powder River at Moorhead, Mont .....	06324500	8,088	1929-72;1974-	--	1950-53; 1955-57; 1968-72; 1974-92.	1974-97.	--	
Little Powder River:								
Little Powder River tributary near Gillette .....	06324800	.81	--	1960-81.	--	--	--	
Rawhide Creek:								
Box Draw:								
Box Draw tributary near Gillette.....	06324810	.5	--	1965-72.	--	--	--	
Rawhide Creek tributary near Gillette .....	06324820	2.6	--	1965-72.	--	--	--	
Little Powder River below Corral Creek, near Weston	06324890	204	1975;1977-83.	--	1975-83.	1975-83.	1976-82.	
Cedar Draw near Gillette (formerly Little Powder River tributary No. 2 near Gillette) .....	06324900	3.45	--	1959-81.	--	--	--	
Cow Creek:								
Cow Creek tributary near Weston .....	06324910	.72	--	1971-84.	--	--	--	
Little Powder River near Weston .....	06324925	540	1977-81.	--	1969; 1975-81.	1975-81.	1975-81.	
Little Powder River above Dry Creek, near Weston...	06324970	1,235	1972-	--	1975-82; 1985-	1975-82, 1999-2001.	1975-82, 1999; 2001.	
Little Powder River near Wyoming-Montana State line .....	06324985	--	--	--	1969-70.	--	--	
<b>LITTLE MISSOURI RIVER BASIN</b>								
Little Missouri River near New Haven.....	06332800	--	--	--	1976-77.	--	1976-77.	
<b>CHEYENNE RIVER BASIN</b>								
Antelope Creek (head of Cheyenne River):								
Wind Creek:								
Reservoir No. 13 .....	06361500	.60	1951-54g.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>CHEYENNE RIVER BASIN--continued</b>								
Antelope Creek--continued								
Sand Creek:								
Reservoir No. 35A .....	06362000	.61	1952-54g.	--	--	--	--	
Reservoir No. 13A .....	06363000	.28	1952-54g.	--	--	--	--	
Porcupine Creek:								
Reservoir No. 10B.....	06363500	0.20	1952-54.	--	--	--	--	
Porcupine Creek near Turnercrest .....	06363700	31.5	--	1959-76.	--	--	--	
Reservoir No. 10A .....	06364000	.43	1952-54g.	--	--	--	--	
Reservoir No. 11 .....	06364500	2.46	1951-54g.	--	--	--	--	
Antelope Creek near Teckla .....	06364700	959	1977-81.	--	1977-81; 2001.	1977-81.	1977-81.	
Dry Fork:								
Reservoir No. 40 .....	06365000	.71	1951-54g.	--	--	--	--	
Bear Creek:								
Reservoir No. 36 .....	06365200	.48	1951-54g.	--	--	--	--	
Dry Fork Cheyenne River near Bill .....	06365300	128	1976-81;1985-87.	--	1977-81; 1987.	1977-81; 1987.	1979.	
Reservoir No. 33A .....	06365500	.44	1952-54g.	--	--	--	--	
Cheyenne River near Dull Center .....	06365900	1,527	1976-81;1985-87.	--	1975-81; 1987.	1975-81; 1987.	1978-81.	
Reservoir No. 14 .....	06366000	10.9	1950-51g;1953-54g.	--	--	--	--	
Reservoir No. 31 .....	06366500	.35	1951-52g.	--	--	--	--	
Reservoir No. 30 .....	06367000	1.31	1951-52g.	--	--	--	--	
Reservoir No. 32 .....	06367500	.59	1951-52g.	--	--	--	--	
Reservoir No. 26 .....	06368000	1.51	1951-52g.	--	--	--	--	
Reservoir No. 22 .....	06368500	.02	1951g.	--	--	--	--	
Reservoir No. 28 .....	06369000	.68	1951-52g.	--	--	--	--	
Reservoir No. 27 .....	06369500	1.09	1951-52g.	--	--	--	--	
Reservoir No. 24 .....	06370000	.52	1951-52g.	--	--	--	--	
Reservoir No. 23 .....	06370500	2.67	1951-52g.	--	--	--	--	
Reservoir No. 21 .....	06371000	.31	1951-52g.	--	--	--	--	
Reservoir No. 18 .....	06371500	.30	1951-52g.	--	--	--	--	
Reservoir No. 17 .....	06372000	.06	1951-54g.	--	--	--	--	
Reservoir No. 25 .....	06372500	.56	1951-54g.	--	--	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>CHEYENNE RIVER BASIN--continued</b>							
Reservoir No. 20 .....	06373000	.11	1951-52g.	--	--	--	--
Reservoir No. 19 .....	06373500	.92	1951-54g.	--	--	--	--
Reservoir No. 16 .....	06374000	.18	1951-52g.	--	--	--	--
Reservoir No. 15 .....	06374500	9.58	1951-54g.	--	--	--	--
Black Thunder Creek:							
Little Thunder Creek:							
Reservoir No. 10 .....	06375000	0.66	1951-54g.	--	--	--	--
Reservoir No. 12 .....	06375500	.28	1951-52g.	--	--	--	--
Little Thunder Creek near Hampshire .....	06375600	234	1977-81;1987-97.	--	1977-81; 1988; 1990-97.	1977-81; 1988; 1990-97.	1977-81.
Reservoir No. 7A .....	06376000	.23	1952-54g.	--	--	--	--
Black Thunder Creek near Hampshire .....	06376300	e535	1972-90.	--	1980-81; 2001.	1980-81; 1986-87; 1989.	1980-81.
Lodgepole Creek:							
Reservoir No. 9 .....	06376500	.94	1951-54g.	--	--	--	--
Reservoir No. 7 .....	06377000	2.68	1951-54g.	--	--	--	--
Reservoir No. 8 .....	06377500	.10	1951-54g.	--	--	--	--
Reservoir No. 7B.....	06378000	1.40	1952-54g.	--	--	--	--
Lodgepole Creek near Hampshire .....	06378300	354	1977-81.	--	1978-81.	1978-81.	1978-81.
Boggy Creek:							
Reservoir No. 35 .....	06378500	7.52	1950-54g.	--	--	--	--
Lance Creek:							
Lance Creek tributary near Lance Creek. ....	06378640	1.20	--	1965-73.	--	--	--
Lightning Creek:							
Reservoir No. 55 .....	06379000	.05	1953-54g.	--	--	--	--
Box Creek:							
Reservoir No. 41 .....	06379500	1.27	1951-54g.	--	--	--	--
Box Creek near Bill .....	06379600	112	1956-58.	1959;1961-81	--	--	--
Walker Creek:							
Reservoir No. 56.....	06380000	.70	1953-54g.	--	--	--	--
Reservoir No. 57.....	06380500	.21	1953-54g.	--	--	--	--
Dry Creek:							
Reservoir No. 36A.....	06381000	.41	1953-54g.	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>CHEYENNE RIVER BASIN--continued</b>							
Lance Creek--continued							
Lightning Creek--continued							
Twentymile Creek:							
Reservoir No. 58 .....	06381500	0.07	1953-54g.	--	--	--	--
Reservoir No. 42 (on Twentymile Draw) .....	06382000	.33	1951-54g.	--	--	--	--
Pritchard Draw near Lance Creek .....	06382200	5.10	--	1964-81.	--	--	--
Cow Creek:							
Reservoir No. 34 .....	06382500	.34	1951-54g.	--	--	--	--
Reservoir No. 37 .....	06383000	2.47	1951-54g.	--	--	--	--
Reservoir No. 38 .....	06383500	1.70	1951-54g.	--	--	--	--
Dogie Creek:							
Reservoir No. 33 .....	06384000	.73	1951-54g.	--	--	--	--
Crazy Woman Creek:.....							
Reservoir No. 43 .....	06384500	1.26	1951-54g.	--	--	--	--
Reservoir No. 43A .....	06385000	.18	1953-54g.	--	--	--	--
Old Woman Creek:							
Sage Creek:							
Cottonwood Creek at Hat Creek .....	06385400	14.5	--	1972-79.	--	--	--
Reservoir No. 44 .....	06385500	.92	1951-54g.	--	--	--	--
Lance Creek (at Spencer) near Riverview .....	06386000	e2,070	1948-54;1956-83.	--	1975-83.	1971; 1975-83.	1978.
Reservoir No. 39 .....	06386200	.52	1951-54g.	--	--	--	--
Cheyenne River at Riverview .....	06386400	e5,160	--	--	1980-92.	1981-82.	1980-82.
(South Fork) Cheyenne River near Spencer .....	06386500	e5,270	1948-74.	--	1969-70; 1975-80.	1971-74.	1975-80.
Beaver Creek:							
Turner Creek near Osage .....	06387500	47.8	--	1959-84.	--	--	--
Reservoir No. 3 .....	06388000	.25	1951-54g.	--	--	--	--
Stockade Beaver Creek:							
Reservoir No. 1 .....	06388200	.08	1951-54g.	--	--	--	--
Skull Creek:							
Oil Creek:							
Reservoir No. 4 .....	06388500	.11	1951-54g.	--	--	--	--

Footnotes at end of the table.



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>CHEYENNE RIVER BASIN--continued</b>								
Cheyenne River--continued								
Beaver Creek--continued								
Blacktail Creek:								
Blacktail Creek tributary near Newcastle .....	06388800	0.25	--	1960-81.	--	--	--	
Reservoir No. 6.....	06389000	3.80	1951-54g.	--	--	--	--	
Reservoir No. 6A.....	06389500	.44	1952-54g.	--	--	--	--	
Reservoir No. 6C.....	06390000	.16	1954g.	--	--	--	--	
Reservoir No. 6B.....	06390500	1.52	1953-54g.	--	--	--	--	
Reservoir No. 5A.....	06391500	1.39	1953-54g.	--	--	--	--	
Reservoir No. 2.....	06392000	6.06	1951-53g.	--	--	--	--	
Reservoir No. 5.....	06392500	.54	1951-54g.	--	--	--	--	
Beaver Creek at Mallo Camp, near Four Corners. ....	06392900	10.3	1974-82;1991-	--	--	--	--	
Stockade Beaver Creek near Newcastle.....	06392950	107	1974-82;1991-	--	--	--	--	
Redbird Canyon:								
Gillette Canyon:								
Reservoir No. 45, S. Dak .....	06393000	1.02	1951-54.	--	--	--	--	
Beaver Creek near Newcastle .....	06394000	e1,320	1943;1945-97.	--	1946-47; 1949-53; 1967-86.	1977-78.	1978.	
Beaver Creek near Burdock (Edgemont), S. Dak.....								
Reservoir No. 39A .....	06394700	.12	1953-54g.	--	--	--	--	
Reservoir No. 46, S. Dak .....	06394800	.30	1951-54g.	--	--	--	--	
Cheyenne River at Edgemont, S. Dak .....	06395000	7,143	1903-6;1928-33;1946-	--	--	--	--	
Cottonwood Creek:								
Reservoir No. 47B.....	06395500	.05	1952-54g.	--	--	--	--	
Reservoir No. 47A, S. Dak .....	06396000	.05	1952-54g.	--	--	--	--	
Belle Fourche River:								
Belle Fourche River tributary near Turnercrest .....	06425700	.35	--	1961-71.	--	--	--	
Belle Fourche River below Rattlesnake Creek, near Piney .....	06425720	495	1975-83;2001.	--	1975-83; 2001.	1976-79; 1981-83.	1976-77; 1980-82.	
Coal Creek near Piney .....	06425750	71.8	1980-83.	--	1981-83.	1981-83.	1981.	

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## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>CHEYENNE RIVER BASIN--continued</b>							
Belle Fourche River--continued							
Belle Fourche River above Dry Creek, near Piney .....	06425780	594	1975-83.	--	1975-83.	1976-83.	1976-77; 1980-82.
Caballo Creek near Gillette.....	06425800	122	--	1959-69.	--	--	--
Caballo Creek at mouth, near Piney .....	06425900	260	1977-83.	--	1977-80; 1982-83; 2001.	1977-80; 1982-83.	1978-80.
Raven Creek near Moorcroft .....	06425950	76	1977-83.	--	1978-80.	1977-79.	1978-79.
Belle Fourche River near Moorcroft.....	06426000	e1,380	1923-33.	--	--	--	--
Donkey Creek:							
Stonepile Creek:							
Burlington Lake Ditch at Gillette.....	06426095	--	1988-90.	--	--	--	--
Stonepile Creek at Gillette .....	06426100	11.2	1988-92.	--	1988-92.	1988-92.	1988-92.
Donkey Creek near Gillette.....	06426130	63.4	2000-				
Stonepile Creek at mouth, near Gillette.....	06426160	14.5	2000-				
Donkey Creek tributary above reservoir, near Gillette.....	06426195	.2	--	1970-84.	--	--	--
Donkey Creek tributary near Gillette .....	06426200	.28	--	1960-76.	--	--	--
Donkey Creek near Moorcroft.....	06426400	246	1977-81.	--	1977-89; 2001.	1977-81.	1977-81; 1983-89.
Belle Fourche River below Moorcroft .....	06426500	1,690	1943-70;1975-83; 1985-87;1990-	--	1972;1975-1993;1995-	1976-83; 1986-87; 1990-93.	1975-93; 1995-
Keyhole Reservoir near Moorcroft .....	06427000	1,953	1952-	--	--	--	--
Belle Fourche River below Keyhole Reservoir.....	06427500	1,954	1951-95.	--	1969; 1984-90.	--	--
Inyan Kara Creek near Upton .....	06427700	96.5	--	1959-84.	1968;1974.	--	--
Belle Fourche River at Devils Tower.....	06427850	--	--	--	1967-92.	--	1973-77.
Barlow Creek near Devils Tower .....	06427880	21.9	--	1971-76.	--	--	--
Blacktail Creek near Hulett.....	06427900	42.3	--	1962-69.	--	--	--
Belle Fourche River at Hulett .....	06428000	e2,800	1929-32;1938-51.	--	--	--	--
Belle Fourche River below Hulett .....	06428050	--	--	--	1981-	--	1981-89; 1993-
Belle Fourche River tributary No. 2 near Hulett.....	06428100	10.2	--	1962-84.	--	--	--
Belle Fourche River near Alva .....	06428200	2,948	1988-98; 2001-	--	--	--	--

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>CHEYENNE RIVER BASIN--continued</b>								
Belle Fourche River--continued								
Belle Fourche River at Wyoming-South Dakota State line .....	06428500	e3,280	1946-	--	1960; 1965-88.	1960.	1970-81.	
Redwater Creek:								
Rocky Ford Creek:								
Ogden Creek near Sundance .....	06429300	8.42	--	1962-81.	--	--	--	--
Sundance Creek:								
Sundance Creek tributary above forest boundary, at Sundance .....	06429375	.76	--	1969-72.	--	--	--	--
Sundance Creek tributary at Sundance .....	06429380	1.40	--	1965-68.	--	--	--	--
Sundance Creek tributary near Sundance .....	06429400	1.80	--	1962-71.	--	--	--	--
Cold Springs Creek (head of Sand Creek) at Buckhorn.....	06429500	19.0	1974-82;1991-	--	--	--	--	--
Sand Creek above Ranch A, near Beulah .....	06429898	--	--	--	1987-91.	--	--	--
Sand Creek at Ranch A, near Beulah .....	06429900	260	1974-76.	--	1987-91.	--	--	--
Sand Creek near Ranch A, near Beulah .....	06429905	267	1976-83;1991-	--	1981-83.	--	--	1981-83.
Murray ditch above headgate, at Wyoming-South Dakota State line .....	06429997	--	1987-	--	--	--	--	--
Murray ditch at Wyoming-South Dakota State line	06430000	--	1954-87.	--	--	--	--	--
Redwater Creek at Wyoming-South Dakota State line	06430500	471	1929-31;1936-37;1954-	--	1969-70.	1971-83.	--	--
<b>NIOBRARA RIVER BASIN</b>								
Niobrara River at Wyoming-Nebraska State line .....	06454000	e450	1955-94.	--	--	--	--	--
<b>PLATTE RIVER BASIN</b>								
North Platte River near Northgate (Pinkhampton), Colo..	06620000	1,431	1904;1915-	--	1965-86.	1971-74.	1973-82.	
Douglas Creek above Keystone .....	06620400	22.1	1955-65.	--	--	--	--	--
Douglas Creek near Keystone.....	06620500	25.6	1912;1914-16.	--	--	--	--	--
Douglas Creek near Foxpark .....	06621000	120	1946-72.	--	--	--	--	--
Mullen Creek:								
North Fork Mullen (Mullen) Creek near French .....	06621500	--	1911a.	--	--	--	--	--
Big Creek at Big Creek ranger station (near Downington, Big Creek) .....	06622000	106	1911a;1912-24.	--	--	--	--	--
French Creek near French.....	06622500	59.6	1909-24.	--	--	--	--	--
North Brush Creek near Saratoga .....	06622700	37.4	1960-	--	--	--	--	--
South Brush Creek near Saratoga .....	06622900	22.8	1960-74;1976-77;1979-	--	--	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>PLATTE RIVER BASIN--continued</b>								
North Platte River--continued								
Brush Creek at upper station, near Saratoga (near Saratoga).....	06623000	77.0	1941-47.	--	--	--	--	
Brush Creek at lower station, near Saratoga (near Saratoga).....	06623500	107	1909-15.	--	--	--	--	
Encampment River above East Fork, near Encampment	06623750	--	--	--	1991-92.	1991-92	1991-92.	
East Fork Encampment River at mouth, near Encampment .....	06623790	--	--	--	1991-92.	1991-92.	1991-92.	
Encampment River above Hog Park Creek, near Encampment.....	06623800	72.7	1964-	--	1964-96.	1970-96.	1973-96.	
Encampment River near Encampment .....	06623900	105	1956-64.	--	--	--	--	
Encampment River above Encampment .....	06624000	207	1940-44.	--	--	--	--	
Encampment River (Grand Encampment Creek) at Encampment (Perym's ranch).....	06624500	211	1900;1909-24;1928-32.	--	--	--	--	
Encampment River at mouth, near Encampment .....	06625000	265	1940-	--	1965-89.	--	1973-78; 1982-83; 1987-89.	
Cow Creek near Saratoga .....	06625500	58.9	1911-12.	--	--	--	--	
North Platte River at Highway 130, near Saratoga (formerly 412117106433201) .....	06625650	--	--	--	1977; 1984-91.	--	--	
Spring Creek:								
North Spring Creek near Saratoga .....	06626000	24.5	1913-15.	--	--	--	--	
Spring Creek near Saratoga .....	06626500	114	1911-12.	--	--	--	--	
North Platte River at Saratoga.....	06627000	2,840	1903-6;1909-70.	--	1967.	--	--	
Jack Creek at Jack Creek Park, near Saratoga.....	06627300	12.2	1966-68.	--	--	--	--	
Jack Creek at Matheson Ranch, near Saratoga.....	06627500	41.2	1913-24.	--	--	--	--	
Jack Creek below Little Jack (Willow) Creek, near Saratoga .....	06627600	98.2	1956-58;1966-68.	--	--	--	--	
Jack Creek above Coyote Draw, near Saratoga .....	06627800	109	1989-	--	--	--	--	
Jack Creek at Blydenburgh's ranch, near Saratoga.....	06628000	113	1912-14.	--	--	--	--	
Jack Creek near Saratoga.....	06628500	138	1911-12.	--	--	--	--	
North Platte River near Saratoga.....	06628550	--	--	--	1971-74.	--	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Sage Creek below Adams Reservoir, near Rawlins.....	06628700	24.3	1966-68.	--	--	--	--
Sage Creek near Rawlins .....	06628750	52.0	1966-68.	--	--	--	--
Sage Creek near Saratoga .....	06628800	263	1973-81.	--	1972-81.	1972-81.	--
Pass Creek near Elk Mountain.....	06628900	91.5	1957-	--	1983.	--	--
Pass Creek near Saratoga.....	06629000	106	1929-32.	--	--	--	--
Rattlesnake Creek near Walcott.....	06629100	13.9	--	1962-74.	1983.	--	--
Coal Bank Draw:							
Coal Bank Draw tributary near Walcott.....	06629150	3.65	--	1962-81.	--	--	--
Coal Bank Draw tributary No. 2 near Walcott.....	06629200	2.41	--	1962-81.	--	--	--
Pass Creek tributary near Walcott.....	06629300	.66	--	1963-67.	--	--	--
Pass Creek near Walcott .....	06629500	230	1911.	--	--	--	--
St. Mary Creek:							
St. Mary Creek tributary No. 2 near Hanna.....	06629600	3.90	--	1963-67.	--	--	--
Kenny Creek near Hanna .....	06629650	.46	--	1963-67.	--	--	--
St. Mary Creek tributary near Sinclair.....	06629700	.46	--	1959-71.	--	--	--
Sugar Creek:							
Coal Creek near Rawlins .....	06629800	7.32	--	1959-81.	--	--	--
Great Divide basin:							
Delaney Draw near Red Desert.....	06629850	32.8	--	1961-75.	--	--	--
North Platte River above Seminole Reservoir, near Sinclair (Parco) .....	06630000	b4,175	1939-	--	1960-2001.	1974; 1986-94.	1973-99; 2001.
Big Ditch:							
Big Ditch tributary near Hanna.....	06630200	7.42	--	1959-81.	--	--	--
Big Ditch near Coyote Springs .....	06630300	110	1975-81.	--	1976; 1978-81.	1976; 1978-81.	--
North Ditch near Coyote Springs.....	06630330	22.6	1976-81.	--	1976; 1978-81.	1976;1980.	--
Medicine Bow River at Bow Ranger Station, near Elk Mountain .....							
East Fork Medicine Bow River near Elk Mountain....	06630440	28.7	1972-75.	--	--	--	--
Medicine Bow River near Elk Mountain .....	06630480	17.8	1972-75.	--	--	--	--
Medicine Bow River near Elk Mountain .....	06630500	65.6	1946-47.	--	--	--	--
Mill Creek near Elk Mountain .....	06630600	25.8	--	1963-65.	--	--	--
Bear Creek near Elk Mountain .....	06630800	8.93	--	1962-74.	--	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>PLATTE RIVER BASIN--continued</b>								
North Platte River--continued								
Medicine Bow River near Medicine Bow.....	06631000	190	1911-17;1919-24.	--	--	--	--	
Wagonhound Creek near Elk Mountain.....	06631100	25.6	--	1962-74.	--	--	--	
Third Sand Creek:								
Third Sand Creek tributary near Medicine Bow .....	06631140	.78	--	1965-73.	--	--	--	
Third Sand Creek near Medicine Bow .....	06631150	10.8	--	1965-81.	--	--	--	
Foote Creek near Arlington .....	06631200	5.49	--	1962-69.	--	--	--	
Foote Creek tributary No. 2 near Arlington.....	06631230	1.43	--	1962-65.	--	--	--	
Foote Creek tributary near Arlington.....	06631260	2.10	--	1962-70.	--	--	--	
Medicine Bow River above Rock Creek, near Medicine Bow.....	06631500	b436	1951-63.	--	--	--	--	
Rock Creek:								
Deep Creek near Arlington .....	06632000	3.13	1914-18.	--	--	--	--	
Carlson Creek ditch near Arlington .....	06632050	--	1992-95.	--	--	--	--	
Carlson Creek ditch above Wagonhound Creek, near Arlington .....	06632055	--	1994-95.	--	--	--	--	
Rock Creek above King Canyon Canal, near Arlington.....	06632400	62.9	1965-	--	1967.	--	--	
Rock Creek at (near) Arlington .....	06632500	64.5	1910-18;1939-65.	--	--	--	--	
Threemile Creek near Arlington .....	06632600	6.31	--	1962-74.	--	--	--	
Onemile Creek near Arlington .....	06632700	3.59	--	1962-74.	--	--	--	
Rock Creek near Rock River .....	06633000	187	1911-12;1928-33.	--	--	--	--	
Rock Creek below Rock River.....	06633500	218	1940-42;1951-68.	--	1965-68.	--	--	
Medicine Bow River at Medicine Bow.....	06634000	1,030	1901.	--	--	--	--	
Little Medicine Bow River at Heward Ranch.....	06634030	--	--	--	1972-73.	--	--	
Little Medicine Bow River near Shirley Basin.....	06634100	--	--	--	1972-73.	--	--	
Sheep Creek near Marshall .....	06634200	61.0	--	1961-81.	--	--	--	
Sheep Creek near Medicine Bow.....	06634300	174	--	1961-81.	--	--	--	
Muddy Creek near Shirley .....	06634500	76.6	1915-16.	--	--	--	--	
Little Medicine Bow River near Medicine Bow .....	06634600	963	1973-84.	--	1965-84.	1971-82.	--	
Little Medicine Bow River at Boles Spring, near Medicine Bow.....	06634620	969	1973-	--	1985-89.	--	--	
Medicine Bow River tributary near Hanna .....	06634910	3.01	--	1965-84.	--	--	--	

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Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Medicine Bow River--continued							
Willow Springs Draw:							
Willow Springs Draw tributary near Hanna.....	06634950	1.98	--	1965-73.	--	--	--
Hanna Draw near Hanna .....	06634990	21.6	1975-81.	--	1975-81.	1975-81.	--
Medicine Bow River above Seminole Reservoir, near Hanna.....	06635000	b2,338	1939-	--	1965-93.	1971-82; 1987-89.	--
Seminole Reservoir near Leo .....	06635500	b7,230	1939-	--	1972-78h.	--	1975-78h.
North Platte River above Pathfinder Reservoir .....	06636000	b7,241	1913-39;1950-59.	--	1969-82; 1987-89.	1987-89.	
Sage Creek above Pathfinder Reservoir.....	06636500	190	1915-25.	--	--	--	--
Deweese Creek near Alcova .....	06637000	16.4	1918;1923-24.	--	--	--	--
Sand Creek near Alcova .....	06637500	51.0	1915-24.	--	--	--	--
Sweetwater River near South Pass City.....	06637550	177	1958-73.	1974-81.	1975-78.	1975-78.	--
Willow Creek near Atlantic City .....	06637600	3.08	1957-58.	--	--	--	--
Willow Creek near South Pass City.....	06637700	9.21	1957-58.	--	--	--	--
Sweetwater River above Rock Creek, near Atlantic City	06637740	--	--	--	--	1981.	--
Rock Creek above Rock Creek Reservoir .....	06637750	e9.2	1962-95.	--	1978.	1975.	--
Rock Creek near South Pass City .....	06637800	9.87	1957-60.	--	--	--	--
Rock Creek near Atlantic City.....	06637850	14.6	1957.	--	--	--	--
Slate Creek near Atlantic City .....	06637900	5.92	1957-73.	--	--	--	--
Rock Creek at Atlantic City.....	06637910	21.3	1957-76.	--	1957-59; 1966-67; 1969-71; 1976.	1964-66; 1968; 1971-72; 1976.	--
Rock Creek at Oregon Trail Crossing, near Atlantic City .....	06637950	--	--	--	--	1981.	--
Sweetwater River near Atlantic City .....	06638000	438	1946-51.	--	--	--	--
Sweetwater River near Sweetwater Station .....	06638090	849	1973-92.	--	--	--	--
Sweetwater River at Sweetwater Station, near Lander..	06638100	889	--	1965-73.	--	--	--
Crooks Creek:							
West Fork Crooks Creek near Jeffrey City .....	06638300	11.6	--	1961-81.	1976-78.	1976-78.	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Sweetwater River--continued							
Muddy Creek:							
Coal Creek near Muddy Gap .....	06638350	6.08	--	1961-81.	--	--	--
Cherry Creek near Lamont .....	06638400	29.4	--	1960-70.	--	--	--
Sweetwater River at Devils Gate, near Splitrock (near Splitrock) .....	06638500	2,290	1902-3.	--	--	--	--
Sweetwater River near Alcova.....	06639000	2,327	1913-24;1938-	--	1964-90.	1975-82. 1973-82.	
Horse Creek at Highway 220, near Alcova .....	06639480	--	--	--	1982-90.	--	--
Horse Creek near Alcova .....	06639500	117	1915-20;1923-24.	--	--	--	--
Canyon Creek near Alcova .....	06640000	97.1	1915-24.	--	--	--	--
Pathfinder Reservoir near Alcova.....	06640500	b10,711	1909-	--	1975-77h.	--.	1975-77h.
North Platte River below Pathfinder Reservoir (at Pathfinder) .....	06641000	b14,671	1905-60.	--	--	--	--
Bear Springs Creek near Alcova.....	06641400	9.33	--	1960-84.	--	--	--
Alcova Reservoir at Alcova.....	06641500	b10,766	1938-	--	1975-76h.	--	1975-76h.
North Platte River at Alcova .....	06642000	b10,812	1904-5;1934-98.	--	1965-88; 1992-95.	1976; 1980-86; 1988.	1973-87.
Bates Creek near Freeland .....	06642500	118	1940-41;1945-51.	--	1981-86.	--	--
Stinking Creek near Alcova .....	06642650	91.8	1983-84.	--	1983-84.	1983-84.	--
Lawn Creek near Alcova.....	06642700	11.5	--	1961-84.	--	--	--
Stinking Creek tributary near Alcova .....	06642730	1.34	--	1961-71.	--	--	--
Stinking Creek near Alcova .....	06642760	117	--	1961-81.	--	--	--
Bates Creek near Alcova (Casper).....	06643000	393	1916-24;1935-61.	--	1965; 1968-86; 1988; 1993.	1988.	--
Coal Creek near Goose Egg.....	06643300	5.39	--	1960-84.	--	--	--
North Platte River near Goose Egg (Casper) .....	06643500	b11,423	1917-19;1924;1947; 1950-60;1983-86; 1988-95.	--	1957-60. 1985-87; 1989.	1985-87.	1987.
North Platte River near Goose Egg .....	06643510	--	--	--	1977-79; 1982-89; 1992-95.	1983;1988.	1977-79; 1982-87.

Footnotes at end of the table.



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>PLATTE RIVER BASIN--continued</b>								
North Platte River--continued								
Poison Spider Creek near Goose Egg.....	06644000	301	1950-56.	--	1965; 1967-70; 1979;1986; 1988; 1992-95.	1988.	--	
North Platte River at Mills .....	06644085	--	--	--	1970-89.	1988.	1974-77; 1982-87.	
Casper Creek:								
Middle Fork Casper Creek near Bucknam .....	06644120	--	--	--	1967-75; 1988; 1992-94.	--	--	
South Fork Casper Creek:								
Clarks Gulch near Natrona.....	06644200	2.64	--	1961-72.	--	--	--	
Casper Creek at Casper.....	06644500	668	1946-56.	--	1965; 1967-88; 1992-95.	1988.	1974; 1982-87.	
North Platte River at Casper.....	06644550	--	--	--	1971-94.	1971-82.	1982-87.	
Reefs Draw:								
Reefs Draw tributary near Casper.....	06644700	.47	--	1959-71.	--	--	--	
Sand Spring Creek:								
McKenzie Draw:								
McKenzie Draw tributary near Casper.....	06644840	2.02	--	1965-81.	--	--	--	
North Platte River below (at) Casper .....	06645000	b12,574	1929-59.	--	1949-53; 1957-59; 1967-	1971;1988.	1970-89.	
Smith Creek above Otter Creek, near Casper .....	06645150	9.91	1974-79;1987-96.	--	--	--	--	
Smith Creek at Otter Creek, near Casper.....	06645160	10.9	1974-79.	--	--	--	--	
Otter Creek at mouth, near Casper.....	06645164	6.50	1987-96.	--	--	--	--	
Smith Creek below Otter Creek, near Casper.....	06645166	18.5	1987-96.	--	--	--	--	
Beaver Creek above Pole Creek, near Casper .....	06645174	4.67	1987-96.	--	--	--	--	
Pole Creek near Casper .....	06645178	2.70	1987-96.	--	--	--	--	
North Platte River at Parkerton .....	06645500	b17,135	1919-24.	--	--	--	--	
Deer Creek in Canyon, near Glenrock.....	06646000	139	1946-51;1985-	--	1985-91.	1985-91.	1985-91.	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Deer Creek--continued							
Little Deer Creek above East Cart Creek, near Glenrock .....	06646280	3.89	1974-76.	--	--	--	--
Little Deer Creek below East Cart Creek, near Glenrock .....	06646300	7.48	1974-76.	--	--	--	--
Deer Creek at Glenrock .....	06646500	212	1916-24;1928-33; 1935-61.	--	--	--	--
Deer Creek below Millar wasteway, at Glenrock .....	06646600	213	1961-92.	--	1965; 1967-86.	--	--
North Platte River below Deer Creek, near Glenrock .....	06646610	--	--	--	1979.	--	--
Dry Creek:							
East Fork Dry Creek:							
East Fork Dry Creek tributary near Glenrock .....	06646700	2.60	--	1961-81.	--	--	--
Sand Creek near Glenrock .....	06646780	79.9	1977-81.	--	1978-80.	1978-80.	1978-80.
North Platte River near Glenrock .....	06646800	b13,538	1959-92.	--	1960-86.	1976.	--
Running Dutchman Canal near Careyhurst .....	06647000	--	1935-50.	--	--	--	--
North Platte River near Careyhurst .....	06647020	--	--	--	1969-76.	--	--
Box Elder Creek at Boxelder .....	06647500	63.0	1946-51;1961-67;1971-	--	--	--	--
Box Elder Creek near Boxelder .....	06647800	136	1981-84.	--	--	--	--
Box Elder Creek at Converse County Park, near Careyhurst .....	06647810	138	1981-84.	--	--	--	--
Little Box Elder Creek near Careyhurst .....	06647890	7.18	1974-88.	--	--	--	--
Little Box Elder Creek at Little Box Elder Cave, near Careyhurst .....	06647900	8.47	1974-88.	--	--	--	--
Little Box Elder Spring near Careyhurst .....	06647910	--	1980-86.	--	1983.	--	--
Cottonwood Creek near Careyhurst .....	06647920	2.33	1981-84.	--	--	--	--
Box Elder Creek below Interstate 25, near Careyhurst .	06647990	--	--	--	1981-86.	--	--
Box Elder Creek near Careyhurst .....	06648000	202	1911;1915-24;1928-33; 1935-69.	--	1965.	--	--
Douglas (Morton) Canal near Orpha .....	06648500	--	1935-51.	--	--	--	--
Sage Creek:							
Frank Draw:							
Frank Draw tributary near Orpha .....	06648720	.79	--	1965-73.	--	--	--
Sage Creek tributary near Orpha .....	06648780	1.38	--	1965-84.	--	--	--

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
La Prele Creek near Douglas .....	06649000	135	1919-92.	--	--	--	--
La Prele Creek below La Prele Reservoir.....	06649200	152	1961-68.	--	1965.	--	--
La Prele Creek near Orpha (Fetterman).....	06649500	177	1916;1918;1923-24; 1928-33;1935-70.	--	1981-86.	--	--
North Platte River at Orpha.....	06649520	--	--	--	1974-75.	--	--
North Platte River tributary near Douglas.....	06649900	8.53	--	1961-81.	--	--	--
North Platte River near (at) Douglas.....	06650000	b18,338	1891-94;1919-23; 1929-39;1946-59.	--	--	--	--
Wagonhound Creek near La Bonte.....	06650500	112	1916-24;1929-32; 1937-69.	--	1965;1979; 1981-86.	--	--
La Bonte Creek:							
West Fork La Bonte Creek near La Bonte .....	06651000	20.6	1946-51.	--	1979.	--	--
La Bonte Creek near La Bonte .....	06651500	287	1916-24;1928-33; 1935-69.	--	1965; 1981-86.	--	--
Sand Creek near Orin .....	06651800	27.8	--	1955; 1961-84.	--	--	--
North Platte River at Orin (Orin Junction) (McKinley) ....	06652000	b15,025	1895-99;1917-18;1924; 1958-	--	1966-89.	1971-82.	1973-89.
Shawnee Creek:							
Shawnee Creek tributary near Orin.....	06652200	.33	--	1961-76.	--	--	--
Lost Creek:							
Watkins (Watson) Draw near Lost Springs.....	06652400	6.95	--	1960-84.	--	--	--
Glendo Reservoir near Glendo .....	06652700	b15,545	1958-	--	1975-76h.	--	1975-76h.
North Platte River below Glendo Reservoir.....	06652800	b15,548	1957-	--	1966-88.	--	1973-82.
Horseshoe Creek near Esterbrook .....	06653000	45.5	1946-51.	--	--	--	--
Horseshoe Creek near Binford.....	06653100	e110	1961-64.	--	--	--	--
Horseshoe Creek near Cassa.....	06653300	195	1961-68;1988-96.	--	1965.	--	--
Horseshoe Creek near Glendo .....	06653500	211	1916-18;1921-24; 1928-33;1935-70; 1988-96.	--	--	--	--
North Platte River near Cassa .....	06654000	b19,796	1946-57.	--	1953.	--	--
Cottonwood Creek near Fletcher Park.....	06654500	51.1	1946-51.	--	--	--	--
Cottonwood Creek below Dagley Creek, near Binford.	06654510	54.0	1974-76.	--	--	--	--

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## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Cottonwood Creek below Tunnel Outlet, near Binford.	06654520	57.2	1974-76.	--	--	--	--
Cottonwood Creek near Binford.....	06654550	61	1973-74.	--	--	--	--
Cottonwood Creek at (near) Wendover .....	06655000	196	1916-24;1929-33; 1935-42;1946-55; 1973-74.	--	--	--	--
Deadmans Gulch near Guernsey .....	06655360	.34	--	1965-72.	--	--	--
Fish Canyon near Guernsey .....	06655380	1.06	--	1965-76.	--	--	--
Black Canyon near Guernsey .....	06655400	.22	--	1965-70.	--	--	--
Guernsey Reservoir near Guernsey .....	06655500	b16,224	1928-	--	1972-73.	--	--
Hartville Canyon:							
Sparks Canyon near Hartville .....	06655750	.74	--	1965-72.	--	--	--
North Platte River (North Platte River and Interstate Canal) below Guernsey Reservoir (near, at Guernsey) (at, above Whalen).....							
	06656000	b16,237	1900-98.	--	1950-52; 1955-58; 1965-86.	1979.	1980-81.
North Platte River near Guernsey .....	06656500	--	--	--	1981-83.	--	1981-83.
North Platte River (at recorder station) below Whalen (below Whalen) diversion dam .....							
	06657000	b16,237	1909-	--	1970-76.	--	1974.
Laramie River near (at) Glendevoy, Colo .....	06657500	101	1904-5;1910-82.	--	--	--	--
Laramie River near Jelm.....	06658500	294	1904-5;1911-71.	--	1965;1968.	--	--
Laramie River at Woods Landing (Woods) .....	06659000	392	1890-92;1895a; 1896-1911.	--	--	--	--
Laramie River and Pioneer Canal near Woods .....	06659500	434	1912-24;1926-27;1931-	--	--	--	--
Sand Creek at Colorado-Wyoming State line .....	06659580	29.2	1968-	--	--	--	--
Sand Creek near Tie Siding .....	06659600	39.9	1957-68.	--	--	--	--
Laramie River at Laramie .....	06660000	b1,071	1933-72.	--	1968-70.	--	--
Laramie River above Howell .....	06660070	--	--	--	1980-89.	--	1980-89.
Laramie River at Howell.....	06660100	--	--	--	1974-80.	1974.	1974-80.
Laramie River at Two Rivers .....	06660500	b1,224	1908-27;1932-72.	--	1966-92.	--	--
Little Laramie River near Filmore (Hatton).....	06661000	157	1902-3;1911-26;1933-	--	--	--	--
Little Laramie River at Two Rivers (at Haley's ranch, near Laramie).....	06661500	b376	1903;1910-27;1933-72.	--	1965-87; 1990-92.	--	--

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>MISSOURI RIVER BASIN--continued</b>								
<b>PLATTE RIVER BASIN--continued</b>								
North Platte River--continued								
Laramie River--continued								
Fourmile Creek near Centennial .....	06661530	7.34	--	1963-68.	--	--	--	
Onemile Creek near Centennial .....	06661550	6.12	--	1963-65.	--	--	--	
Fourmile Creek tributary near Centennial .....	06661570	.28	--	1963-71.	--	--	--	
Sevenmile Creek near Centennial .....	06661580	11.2	--	1962-84.	--	--	--	
Laramie River near Bosler .....	06661585	b1,790	1972-	--	1990-92.	1990-92.	--	
Dutton Creek:								
Sheep Creek near Arlington.....	06661590	5.46	--	1962-63.	--	--	--	
Dutton Creek near McFadden.....	06661600	19.9	1958-63.	--	--	--	--	
Cooper Creek near Arlington.....	06661700	8.51	--	1962-65.	--	--	--	
Cooper Creek tributary near Arlington .....	06661740	1.83	--	1962-65.	--	--	--	
South Fork Cooper Creek near Arlington .....	06661750	6.41	--	1962-65.	--	--	--	
Laramie River near Lookout.....	06662000	b2,174	1912-17;1921-27; 1932-96.	--	1965; 1976-80.	--	--	
Wheatland Reservoir No. 2 near Lookout .....	06662500	b2,221	1951-66.	--	--	--	--	
Laramie River at McGill.....	06663000	b2,230	1912-15.	--	--	--	--	
Laramie River below Wheatland Reservoir No. 2 (below McGill) .....	06663500	b2,248	1916-17;1951-63.	--	--	--	--	
Laramie River below Luman Creek, near Wheatland ...	06663900	--	--	--	1989-92.	--	--	
Laramie River near Wheatland .....	06664000	b2,527	1912-16;1929-33.	--	--	--	--	
Sybill Creek above Mule Creek, near Wheatland.....	06664400	194	1974-	--	1984-87.	--	--	
Sybill Creek below Mule Creek, near Wheatland.....	06664490	219	1968-73.	--	--	--	--	
Sybill Creek above Bluegrass Creek, near								
Wheatland.....	06664500	225	1941-68.	--	--	--	--	
Bluegrass Creek near Wheatland .....	06664900	139	1958-63;1968-79.	--	--	--	--	
Sybill Creek below Bluegrass Creek, near								
Wheatland.....	06665000	366	1950-68.	--	1965.	--	--	
Wheatland Canal No. 1 near Wheatland.....	06665500	--	1952-63.	--	1958-59.	--	--	
Sybill Creek above Canal No. 3, near Wheatland.....	06665790	--	1980-	--	--	--	--	
Wheatland Canal No. 3 near Wheatland.....	06665800	--	1958-63.	--	1958-59.	--	--	

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## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Laramie River--continued							
Sybille Creek--continued							
Wheatland Canal No. 2 near Wheatland.....	06666000	--	1952-63.	--	1958-59.	--	--
Sybille Creek near Muleshoe Ranch, near Wheatland	06666500	507	1950-58.	--	--	--	--
Sybille Creek at Muleshoe Ranch, near Wheatland ...	06666600	508	1958-63;1966-67.	--	1959.	--	--
Sybille Creek near Wheatland .....	06667000	515	1912-16.	--	--	--	--
Laramie River above North Laramie River, near Uva ...	06667060	3,131	1973-79.	--	--	--	--
North Laramie River near Garrett.....	06667200	e46	1963-65.	--	--	--	--
North Laramie River (at upper station) near Wheatland.....	06667500	370	1915-23;1939-71; 1973-74.	--	--	--	--
Piney Creek:							
Piney Creek tributary at upper station, near Wheatland .....	06667560	.18	--	1965-72.	--	--	--
Piney Creek tributary at lower station, near Wheatland .....	06667580	.58	--	1965-70.	--	--	--
North Laramie River at Wilson's ranch, near Wheatland.....							
Wheatland.....	06668000	377	1912-14.	--	--	--	--
Rabbit Creek near Wheatland .....	06668040	1.30	--	1965-84.	--	--	--
Fish Creek near Fletcher Park .....	06668200	6.33	1973-74.	--	--	--	--
North Laramie River at Uva.....	06668500	530	1911-12.	--	--	--	--
Laramie River at Uva.....	06669000	b3,662	1895-99;1903.	--	--	--	--
Wheatland Creek below Wheatland.....	06669050	--	--	--	1982-	--	1982-
Wheatland Creek near Uva .....	06669100	56.7	1973-74.	--	--	--	--
Chugwater Creek at Platte-Laramie County line, near Chugwater (formerly 413918105021401) .....							
Chugwater Creek at Chugwater .....	06669350	--	--	--	1984-89.	--	--
Chugwater Creek at Chugwater .....	06669500	349	1911-21;1938-40.	--	1984-89.	--	--
Chugwater Creek tributary near Chugwater .....	06669600	.23	--	1960-68.	--	--	--
Chugwater Creek near Uva.....	06669850	654	1966-68;1973-74.	--	1958-59; 1965; 1984-85.	--	--
Laramie River near Uva.....	06670000	b4,440	1952-68.	--	1956-59.	--	--
Laramie River tributary near Guernsey .....	06670100	1.97	--	1971-79.	--	--	--

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Laramie River--continued							
Laramie River tributary No. 2 near Fort Laramie .....	06670480	8.91	--	1971-76.	--	--	--
Laramie River near (at) Fort Laramie .....	06670500	b4,564	1915-	--	1965-88.	1971-82.	1973-82.
North Platte River near Lingle .....	06670900	b25,095	1968-75.	--	1969-75.	1969-75.	--
Rawhide Creek:							
Dry Rawhide Creek near Lingle .....	06670985	20	--	1969-81.	--	--	--
Rawhide Creek above Interstate Canal, near Lingle.....	06670990	--	--	--	1970-73.	--	--
Rawhide Creek near Lingle .....	06671000	522	1928-92.	--	1965; 1970-73.	--	--
North Platte River at Vaughn.....	06671500	b25,648	1924.	--	--	--	--
North Platte River at Torrington.....	06672000	b25,742	1917-24;1926-39.	--	1975-79.	--	--
Cherry Creek drain near Torrington .....	06672500	356	1931-32;1935-92.	--	1969-72.	--	--
Arnold drain near Torrington.....	06673000	--	1931;1940-42.	--	1971-72.	--	--
Katzer drain near Henry, Nebr.....	06673500	b45.9	1928-92.	--	1971.	--	--
Mitchell Canal at Wyoming-Nebraska State line .....	06674000	--	1938-41.	--	--	--	--
North Platte River at Wyoming-Nebraska State line.....	06674500	b22,218	1929-	--	1964-	1971-82.	1970-89; 1998-
Horse Creek:							
Horse Creek tributary near Little Bear .....	06675300	8.16	--	1961-81.	--	--	--
Horse Creek near Meriden.....	06675500	425	1945-47.	--	--	--	--
Horse Creek near Johnson Ranch, near La Grange .....	06675850	595	1978-79.	--	--	--	--
Horse Creek near Little Horse Creek.....	06676000	--	1911-12.	--	--	--	--
Horse Creek (at Wye Cross Bridge) near La Grange ....	06676500	645	1912-20.	--	--	--	--
Horse Creek at WyCross Ranch, near La Grange.....	06676550	651	1965-73;1978-79.	--	1965; 1969-72; 1981-83.	1969-72.	1981-83.
Bear Creek:							
South Fork Bear Creek near Little Bear.....	06676700	34.2	--	1960-76.	--	--	--
Bear Creek near La Grange .....	06676900	516	1978-79.	--	--	--	--
Bear Creek below Lovercheck Canyon, near							
LaGrange .....	06676905	--	--	--.	1992.	--	--
Horse Creek near Yoder.....	06677000	1,347	1928-33;1935-45.	--	--	--	--
Horse Creek at lower station, near Yoder .....	06677010	e1,320	1965-72.	--	1969-72.	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>MISSOURI RIVER BASIN--continued</b>							
<b>PLATTE RIVER BASIN--continued</b>							
North Platte River--continued							
Horse Creek--continued							
Horse Creek at Wyoming-Nebraska State line .....	06677100	1,530	1969-71.	--	--	--	--
North Platte River at Mitchell, Nebr .....	06679500	124,300	1901-13;1916-18; 1920-94.	--	--	--	--
South Platte River:							
Lonetree Creek at Carr, Colo .....	06753400	--	1993-95.		1993-95.	1993-95.	--
South Platte River near (at) Kersey, Colo .....	06754000	9,598	1901-3;1905-	--	1993-	1993-	--
Middle (Fork) Crow Creek near Hecla .....	06754500	25.8	1902-3;1933-69.	--	--	--	--
South (Fork) Crow Creek near Hecla .....	06755000	13.9	1933-69.	--	--	--	--
North Fork Crow Creek near Hecla .....	06755500	27.9	1933-44.	--	--	--	--
Crow Creek at Roundtop Road, near Cheyenne .....	06755800	239	1994-96.	--	1986-92.	--	--
Diamond Creek below Roundtop Road, at F. E.							
Warren Air Force Base .....	06755840	10.75	1994-96.	--	--	--	--
Diamond Creek at F.E. Warren Air Force Base .....	06755860	10.8	1992-96.	--	--	--	--
Diamond Creek at mouth, at F.E. Warren Air Force Base .....							
	06755880	10.9	1992-96.	--	--	--	--
Crow Creek at F.E. Warren Air Force Base .....	06755950	253	1994-96.	--	1983-94.	--	1987-94.
Crow Creek at 19th Street, at Cheyenne .....	06755960	257	1994-	--	--	--	--
Crow Creek near Cheyenne .....	06756000	297	1922-24;1951-57.	--	1972-75; 1983-92.	--	1972-75; 1987-92.
Crow Creek near Archer .....	06756060	--	--	--	1990-	--	1990-
Crow Creek near Carpenter .....	06756100	415	1990-96.	--	1990-92.	--	1990-92.
Lodgepole Creek near Federal .....	06761000	25	1933-38.	--	--	--	--
South Fork Lodgepole Creek near Federal .....	06761500	16	1933-38.	--	--	--	--
Ninemile Draw:							
Ninemile Draw tributary near Federal .....	06761600	1.49	--	1960-76.	--	--	--
Muddy Creek:							
Muddy Creek tributary near Burns .....	06761700	24.8	--	1960-76.	--	--	--
Lodgepole Creek tributary near Pine Bluffs .....	06761900	.44	--	1960-81.	--	--	--
Lodgepole Creek tributary No. 2 near Albin .....	06762600	5.69	--	1960-84.	--	--	--
Lodgepole Creek tributary No. 3 near Albin .....	06762700	.75	--	1960-71.	--	--	--



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN</b>							
<b>GREEN RIVER BASIN</b>							
Green River near Kendall .....	09188000	271	1910-12;1918.	--	--	--	--
Green River at Warren Bridge, near Daniel .....	09188500	468	1932-92;1994-	--	1962-64; 1967-72; 1974-82.	1975-78.	1974-82.
Beaver Creek near Daniel .....	09189000	141	1938-54.	--	--	--	--
North Horse (head of Horse Creek) Creek above Sherman Ranger Station .....	09189495	42.8	1982-84.	--	--	--	--
Horse Creek at Sherman Ranger Station .....	09189500	43.0	1954-74.	--	1976-78.	1976;1978.	1976; 1978.
South Horse Creek near Merna.....	09189550	33.3	1982-85.	--	--	--	--
Horse Creek near Daniel.....	09190000	106	1931-54;1982-85.	--	1969;1977.	1977.	1977.
Horse Creek at Daniel.....	09190500	173	1913-18.	--	--	--	--
Green River near Daniel.....	09191000	932	1912-32.	--	--	--	--
Cottonwood Creek:							
South Cottonwood Creek near Big Piney .....	09191300	21.4	1982-84.	--	--	--	--
Cottonwood Creek near Daniel .....	09191500	202	1938-54.	--	--	--	--
Cottonwood Creek near Big Piney (North channel and South channel) .....	09192000	227	1915-19;1931-32.	--	--	--	--
Cottonwood Creek near mouth, near Big Piney .....	09192500	238	1938-40.	--	--	--	--
Green River near Big Piney.....	09192600	e1,260	--	--	1967-86.	1975-78.	--
New Fork River above New Fork Lakes.....	09192750	21.8	1985.	--	--	--	--
New Fork River (New Fork) below New Fork Lake, near Cora .....	09193000	36.2	1938-72.	--	--	--	--
New Fork River at Alexander's Ranch, near Cora (near Cora) .....	09193500	47.3	1910-11.	--	--	--	--
New Fork River at Pinedale crossing, near Cora (near Cora) .....	09194000	e72	1905.	--	--	--	--
Willow Creek near Cora .....	09194500	41.8	1938-41.	--	--	--	--
Lake Creek near Cora .....	09195000	31.6	1938-41.	--	--	--	--
Duck Creek at Cora.....	09195500	e27	1938-41.	--	--	--	--
New Fork River (New Fork) near Pinedale .....	09196000	241	1938-44.	--	1975.	--	--
Pine Creek above Fremont Lake.....	09196500	75.8	1954-97;2001	--	1975-78; 1980; 1985-88.	1975-78.	1976.

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN--continued</b>							
<b>GREEN RIVER BASIN--continued</b>							
Green River--continued							
New Fork River--continued							
Pine Creek--continued							
Fremont Ditch near Pinedale .....	09196940	--	1985-86;1988-95.	--	--	--	--
Highland Ditch near Pinedale .....	09196960	--	1985-86;1988-95.	--	--	--	--
Pine Creek below Fremont Lake (at Fremont Lake outlet) (near Pinedale) .....	09197000	114	1910-12;1915-18; 1985-86;1988-	--	--	--	--
Pine Creek near Pinedale .....	09197500	118	1904-6.	--	--	--	--
Pine Creek at Pinedale .....	09198000	118	1903-4;1914-54.	--	--	--	--
Pole Creek below Little Half Moon Lake, near Pinedale .....	09198500	87.5	1938-1971.	--	--	--	--
Pole Creek at Fayette .....	09199000	126	1904-6.	--	--	--	--
Fall Creek near Pinedale .....	09199500	37.2	1938-1971.	--	--	--	--
Fall Creek near (at) Fayette.....	09200000	e38	1904-5.	--	--	--	--
Pole Creek near Pinedale .....	09200500	167	1910a.	--	--	--	--
New Fork River (New Fork) near Boulder .....	09201000	552	1914-69.	--	1965; 1967-71.	--	--
Boulder Creek above Boulder Lake, near Boulder .....	09201500	115	1938-39.	--	--	--	--
Boulder Creek below Boulder Lake, near Boulder.....	09202000	130	1938-73.	--	--	--	--
Boulder Creek near Boulder (New Fork).....	09202500	135	1903-6;1914-24; 1930-32.	--	--	--	--
East Fork River (East Fork) near Big Sandy.....	09203000	79.2	1938-92.	--	1965;1968; 1971; 1975-78.	1975-78.	1976-77.
East Fork at East Fork Canal .....	09203500	106	1915-17;1920-23.	--	--	--	--
Silver Creek near Big Sandy .....	09204000	45.4	1938-1971.	--	1965;1977.	1977.	--
East Fork at Newfork .....	09204500	348	1904-6;1914-24; 1930-32.	--	--	--	--
Sand Springs Draw:							
Sand Springs Draw tributary near Boulder .....	09204700	2.77	--	1961-81.	--	--	--
New Fork River near Big Piney.....	09205000	e1,230	1954-	--	1965-86.	1975-78.	1975-78.
North Piney Creek above Apperson Creek, near Mason .....	09205490	29.6	1982-84.	--	--	--	--

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>COLORADO RIVER BASIN--continued</b>								
<b>GREEN RIVER BASIN--continued</b>								
Green River--continued								
North Piney Creek--continued								
North Piney Creek near Mason (Marbleton) .....	09205500	e58	1915-16;1931-1972.	--	1977.	1977.	1977.	
Middle Piney Creek below South Fork, near Big Piney	09206000	34.3	1939-54.	--	--	1981.	--	
Middle Piney Creek above Springman Creek, near Big Piney .....	09206500	42.1	1938-39.	--	--	--	--	
Middle Piney Creek near Big Piney .....	09207000	e46	1914-18;1931-32.	--	--	--	--	
South Piney Creek near Big Piney.....	09207500	117	1938-42.	--	--	--	--	
Dry Basin Creek near Big Piney.....	09207650	47.2	--	1971-81.	1975-76; 1978.	1965; 1975-76; 1978.	--	
Dry Piney Creek near Big Piney.....	09207700	e67	1965-73.	--	1990-93.	1965-68; 1971-73; 1990-93.	--	
La Barge Creek near La Barge Meadows ranger station	09208000	e6.3	1940-42;1950-81.	--	1975-78.	1975-78.	1976-78.	
La Barge Creek above Viola .....	09208400	122	1982-84.	--	--	--	--	
La Barge Creek near Viola (La Barge) .....	09208500	172	1913-16;1940-49.	--	1977-78.	1978.	1977-78.	
La Barge Creek near La Barge (Tulsa) .....	09209000	193	1931-39.	--	1963.	--	--	
Green River near La Barge.....	09209400	e3,910	1963-	--	1963-94.	1975-82; 1986-94.	1973-80; 1986-94.	
Green River near Fontenelle.....	09209500	3,970	1946-65.	--	1962-63.	--	--	
Fontenelle Creek at upper station, near Fontenelle.....	09210000	e58	1941-42.	--	--	--	--	
Fontenelle Creek near Herschler Ranch, near Fontenelle .....	09210500	152	1951-	--	1975-78.	1975-78.	1977.	
Fontenelle Creek near Fontenelle .....	09211000	224	1914-19;1931-53.	--	--	--	--	
Green River tributary near Fontenelle .....	09211100	3.75	--	1961-74.	--	--	--	
Fontenelle Reservoir near Fontenelle.....	09211150	e4,280	1964-2000.	--	1975.	--	--	
Green River below Fontenelle Reservoir .....	09211200	e4,280	1963-	--	1967-	1975-78; 1980.	1973-80.	
Fourmile Gulch:								
Fourmile Gulch tributary near Fontenelle.....	09211300	14.2	--	1971-81.	--	--	--	
Big Sandy River (Creek):								
Squaw Creek near Big Sandy .....	09211500	e28	1911-12.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>COLORADO RIVER BASIN--continued</b>								
<b>GREEN RIVER BASIN--continued</b>								
Green River--continued								
Big Sandy River--continued								
Squaw Creek--continued								
Dutch Joe Creek near Big Sandy .....	09212000	17.0	1911-12.	--	--	--	--	
Big Sandy River (Creek) at Leckie Ranch, near Big Sandy (near Big Sandy).....	09212500	e94	1910-11;1939-87.	--	1961-62; 1975-78.	1974-78.	1977.	
Big Sandy Creek near Eden .....	09213000	265	1911;1912a.	--	--	--	--	
Big Sandy River (Creek) near Farson .....	09213500	322	1914-17;1920-24; 1926-34;1953-	--	1962;1972; 1975-82.	1971-82.	1977.	
Big Sandy Reservoir near Farson .....	09213700	386	1987-	--	--	--	--	
Big Sandy River below Big Sandy Reservoir .....	09213705	--	--	--	1981-86.	--	--	
Big Sandy River at Farson .....	09213800	--	--	--	1981-86.	--	--	
Little Sandy Creek near Elkhorn .....	09214000	20.9	1939-71.	--	1961-62; 1977.	1977.	1977.	
Little Sandy Creek above Eden.....	09214500	134	1954-81.	--	1962; 1975-81.	1972; 1975-81.	1977.	
Jack Morrow Creek near Farson .....	09214955	--	--	--	1981.	--	--	
Pacific Creek near Farson .....	09215000	e500	1954-73.	--	1976-78.	1969; 1976-78.	1976-77.	
Little Sandy Creek near Eden .....	09215500	823	1911-12.	--	1981-86.	--	--	
Big Sandy River below Farson .....	09215550	b1,097	1981-99.	--	1982-99.	--	--	
Simpson Gulch near Farson .....	09215990	78.5	--	1961-69.	--	--	--	
Big Sandy River (Creek) below Eden.....	09216000	e1,610	1954-81.	--	1961-64; 1967-81.	1971-81.	1975-80.	
Big Sandy River at Gasson Bridge, near Eden .....	09216050	e1,720	1972-	--	1975-	1975-79; 1981-82; 1990-93.	1976-78.	
East Otterman Wash near Green River .....	09216290	16.6	--	1969-84.	--	1976.	--	
Green River at Big Island, near Green River .....	09216300	e7,300	--	--	1966-81.	1975-79.	1973-78.	
Skunk Canyon Creek near Green River.....	09216350	15.7	--	1965; 1971-81.	--	--	--	
Greasewood Canyon near Green River.....	09216400	45.1	--	1959-74.	--	--	--	

Footnotes at end of the table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN--continued</b>							
<b>GREEN RIVER BASIN--continued</b>							
Green River at Green River .....	09216500	e7,670	1891;1894-1906; 1914-45.	--	--	--	--
Telephone Canyon near Green River .....	09216510	6.98	--	1965-72.	--	--	--
Telephone Canyon tributary near Green River .....	09216520	3.44	--	1965-72.	--	--	--
Bitter Creek:							
Great Divide basin:							
Separation Creek at upper station, near Riner .....	09216525	41.8	--	--	1975-76.	1975-76.	1976.
Separation Creek near Riner .....	09216527	55.3	1976-81.	--	1976-81.	1976; 1980-81.	1976.
Delaney Draw near Red Desert.....	09216537	34.5	--	1961-84.	1976-78.	1976-78.	--
Bitter Creek near Bitter Creek .....	09216545	308	1975-81.	--	1975-81.	1975-81.	1976-78.
Deadman Wash near Point of Rocks.....	09216550	152	--	1961-81.	1976-78.	1976-78.	--
Bitter Creek near Point of Rocks .....	09216560	765	--	1961-75.	1975-76.	1975-76.	--
Bitter Creek above Salt Wells Creek, near Salt Wells ...	09216562	836	1976-81.	--	1975-81.	1975-81.	--
Salt Wells Creek near South Baxter.....	09216565	34.7	1976-81.	--	1975-81.	1975-81.	1976.
Gap Creek above Beans Spring Creek, near South Baxter .....	09216570	22.0	--	--	1976;1978.	1975-76; 1978.	1976.
Beans Spring Creek near South Baxter .....	09216572	4.92	--	--	1975-76; 1978.	1975-76; 1978.	1975-76.
Beans Spring Creek at mouth, near South Baxter	09216574	13.1	--	--	1975-1976; 1978.	1976;1978.	1975-76.
Gap Creek below Beans Spring Creek, near South Baxter .....	09216576	35.9	1975-76.	1976-81.	1975-76; 1978.	1975-76; 1978.	1975-76.
Dry Canyon Creek near South Baxter.....	09216578	3.69	1976-80.	--	1980.	1979-80.	--
Big Flat Draw near Rock Springs .....	09216580	19.5	--	1973-81.	1976.	1976-77.	--
Cutthroat Draw near Rock Springs (formerly Salt Wells Creek tributary near Rock Springs) .....	09216600	7.88	--	1959-81.	--	--	--
No Name Creek near Rock Springs .....	09216695	18.2	--	1973-81.	1975.	1975; 1977-78.	--
Salt Wells Creek near Rock Springs .....	09216700	515	--	1959-76.	1975-76.	1968; 1975-76.	--
Salt Wells Creek near Salt Wells .....	09216750	526	1976-81.	--	1975-81.	1975-81.	1976.

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## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>COLORADO RIVER BASIN--continued</b>							
<b>GREEN RIVER BASIN--continued</b>							
Green River--continued							
Bitter Creek above Killpecker Creek, at Rock Springs .	09216790	--	--	--	1983-93.	1989-93.	1989-93.
Killpecker Creek at Rock Springs .....	09216810	--	--	--	1975-80; 1983-87.	--	1975-80; 1982-83.
Bitter Creek below Little Bitter Creek, near Kanda .....	09216880	--	--	--	1975-83.	1978; 1980-82.	1975-82.
Bitter Creek tributary near Green River.....	09216900	1.65	--	1959-82.	--	--	--
Bitter Creek near Green River .....	09216950	--	--	--	1966-72.	1966-72.	--
Green River near Green River .....	09217000	114,000	1951-	--	1951-	1960-66; 1970-71; 1973-84; 1990-92.	1973-87.
Green River below Green River .....	09217010	--	--	--	1905;1974-	1975;1977.	1974-89.
Blacks Fork above Blacks Fork ranger station, Utah ....	09217500	48.8	1937-39.	--	--	--	--
Blacks Fork near Robertson.....	09217900	130	1966-86;1992-	--	--	--	--
Blacks Fork at Blacks Fork ranger station, Utah .....	09218000	129	1937-39.	--	--	--	--
Blacks Fork near Millburne .....	09218500	152	1939-98.	--	1969-70; 1975-78.	1975-78.	1976-77.
Blacks Fork near Urie.....	09219000	261	1913-24;1937-55.	--	--	--	--
East Fork of Smiths Fork at China Meadows, near Robertson.....	09219500	36.9	1938-39.	--	--	--	--
East Fork of Smiths Fork near Robertson.....	09220000	53.0	1939-99; 2001-	--	1975-78.	1975-78.	1977.
West Fork of Smiths Fork near Robertson.....	09220500	37.2	1939-81.	--	1975-78.	1975-78.	1977.
Smiths Fork near Robertson .....	09221000	144	1938-39.	--	1969-70; 1976.	1976.	1976.
Smiths Fork at Mountainview .....	09221500	192	1941-57.	--	--	--	--
Smiths Fork near Lyman.....	09221650	--	--	--	1974-89.	1975-78.	1974-82.
Mud Spring Hollow:							
Mud Spring Hollow tributary near Lyman.....	09221670	.97	--	1965-72.	--	--	--
Mud Spring Hollow near Church Butte, near Lyman .....	09221680	8.83	--	1965-84.	1977-78.	1977-78.	--
Mud Spring (Hank) Hollow near Lyman .....	09221700	10.2	--	1959-71.	--	--	--
Blacks Fork near Lyman .....	09222000	821	1937-57;1962-83.	--	1962-89; 1995-	1971-81; 1995-	1973-80; 1995-

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
COLORADO RIVER BASIN--continued								
GREEN RIVER BASIN--continued								
Green River--continued								
Blacks Fork--continued								
Muddy Creek:								
Little Muddy Creek:								
Ryckman Creek near Glencoe.....	09222200	53.4	1980-81.	--	1980-81.	1980-81.	--	
Little Muddy Creek above North Fork, near Glencoe .....	09222250	366	1980-81.	--	1980-81.	1980-81.	--	
Little Muddy Creek near Glencoe.....	09222300	416	1976-80.	--	1975-80.	1975-80.	1976.	
Muddy Creek near Hampton.....	09222400	963	1975-81.	--	1975-81.	1975-81.	1976.	
Blacks Fork above Hams Fork, near (at) Granger (near Granger).....	09222500	e2,170	1896-97.	--	--	--	--	
Hams Fork below Pole Creek, near Frontier .....	09223000	128	1952-	--	1975-78.	1975-78.	--	
Hams Fork near Frontier.....	09223500	298	1945-1972.	--	--	--	--	
Hams Fork at Diamondville (Kemmerer) .....	09224000	386	1917-33;1945-49.	--	--	--	--	
Hams Fork near Diamondville.....	09224050	--	--	--	1975-89; 1992-	1980-82.	1975-89; 1992-	
Hams Fork near Granger.....	09224450	e670	--	--	1967-86.	1971-82.	1975-76.	
Blacks Fork below Hams Fork, at Granger (at Granger)	09224500	e2,840	1896-1900.	--	--	--	--	
Blacks Fork tributary near Granger .....	09224600	5.03	--	1959-81.	--	--	--	
Blacks Fork near Little America.....	09224700	e3,100	1962-	--	1964-	1968; 1970-82; 1989.	1973-82.	
Meadow Springs Wash:								
Meadow Springs Wash (Spider Creek) tributary near Green River .....	09224800	5.22	--	1962-65; 1968-81.	--	1978.	--	
Blacks Fork tributary No. 2 near Green River .....	09224810	12.0	--	1965-81.	1978.	1978.	--	
Blacks Fork tributary No. 3 near Green River .....	09224820	3.59	--	1965-84.	--	--	--	
Blacks Fork tributary No. 4 near Green River .....	09224840	1.26	--	1965-81.	--	--	--	
Blacks Fork near Marston.....	09224900	--	--	--	1959-64.	--	--	
Summers Dry Creek near Green River .....	09224980	423	--	1965-81.	1976-78.	1976-78.	--	

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b><u>COLORADO RIVER BASIN--continued</u></b>								
<b>GREEN RIVER BASIN--continued</b>								
Green River--continued								
Blacks Fork--continued								
Blacks Fork near Green River .....	09225000	e3,670	1947-62.	--	1954-55; 1958-59; 1967.	--	--	
Squaw Hollow near Burntfork .....	09225200	6.57	--	1965-84.	1977-78.	1975; 1977-78.	--	
Green River tributary No. 2 near Burntfork.....	09225300	13.0	--	1959; 1961-81.	1976.	1976-77.	--	
Green River near Linwood, Utah .....	09225500	e14,300	1928-63.	--	--	--	--	
Henrys Fork near Lonetree .....	09226000	e56	1942-72.	--	1969-72; 1976-77.	1977.	1976-77.	
Middle Fork Beaver Creek near Lonetree .....	09226500	e28	1948-70.	--	--	--	--	
East Fork Beaver Creek near Lonetree .....	09227000	e8.2	1948-62.	--	--	--	--	
West Fork Beaver Creek near Lonetree .....	09227500	e23	1948-62.	--	--	--	--	
Henrys Fork near Burntfork.....	09228000	242	1942-54.	--	--	--	--	
Burnt Fork near Burntfork .....	09228500	52.8	1943-83.	--	1969-70; 1975-78.	1975-78.	1977.	
Burnt Fork at Burntfork .....	09229000	e73	1929-43.	--	--	--	--	
Henrys Fork tributary near Manila, Utah.....	09229450	3.15	--	1965-74.	--	--	--	
Henrys Fork near Manila, Utah .....	09229500	e520	1928-93;2001-	--	1954-55; 1958-89.	1972; 1975-78; 1989.	1976.	
Sheep Creek:								
Sheep Creek upper canal near Manila, Utah.....	09231000	--	1949-61.	--	--	--	--	
Carter Creek canal near Manila, Utah .....	09231200	--	1956-61.	--	--	--	--	
Sheep Creek lower canal near Manila, Utah.....	09231500	--	1949-61.	--	--	--	--	
Sheep Creek near Manila, Utah .....	09232000	42	1942-61.	--	--	--	--	
Sheep Creek at mouth, near Manila, Utah.....	09232500	111	1946-61.	--	--	--	--	
Flaming Gorge Reservoir at Flaming Gorge Dam, Utah ..	09234400	e19,350	1962-2000.	--	--	--	--	
Green River near Greendale, Utah .....	09234500	i19,350	1950-	--	1956-59; 1963-2000.	1956-59.	--	
Vermillion Creek near Hiawatha, Colo.....	09235300	196	1975-81.	--	1975-81.	1975-81.	1976-77.	

Footnotes at end of the table.



## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b>COLORADO RIVER BASIN--continued</b>								
<b>GREEN RIVER BASIN--continued</b>								
Green River--continued								
Yampa River:								
Middle Fork Little Snake River:								
North Fork Little Snake River near Encampment...	09251800	9.64	1956-65.	--	--	--	--	
North Fork Little Snake River near Slater, Colo.....	09251900	29.3	1956-63.	--	1957-58; 1977-78.	1977-78.	1977.	
Little Snake River near Slater, Colo .....	09253000	285	1943-47;1950-99;2001-	--	1977-86.	1977.	1977.	
Battle Creek near Encampment .....	09253400	13.0	1956-63;1985-88.	--	1978; 1986-88.	1978; 1986-88.	1978.	
West Fork Battle Creek:								
Haggarty Creek above Belvidere ditch, near Encampment.....	09253455	--	--	--	1993-	--	--	
West Fork Battle Creek at Battle Creek Campground, near Savery .....	09253465	--	--	--	1993-	--	--	
Slater Fork (Creek) near Slater, Colo.....	09255000	161	1910-12;1931-	--	--	--	--	
East Fork Savery Creek near Encampment.....	09255400	5.57	1956-58;1985-88.	--	1986-87.	1986-88.	--	
Savery Creek at upper station, near Savery.....	09255500	200	1940-44;1952-71.	--	1957-58; 1975-78; 1986.	1976-78.	1975-78.	
Big Sandstone Creek near Savery .....	09255900	9.85	1956-58;1985-88.	--	1986-87.	1986-88.	--	
Savery Creek near Savery .....	09256000	330	1941-46;1947-72; 1985-92.	--	1975-78; 1985-91.	1976-78; 1985-91.	1975-78; 1985-91.	
Savery Creek at Savery .....	09256500	354	1915-16;1918-22.	--	1957;1975; 1977.	1977.	1975; 1977.	
Little Snake River near Dixon .....	09257000	988	1910-23;1938-98.	--	1957-58; 1975-78; 1981-88.	1971-82; 1988.	1975-77.	
Willow Creek near Baggs .....	09257500	e5	1911-23.	--	--	--	--	
Willow Creek near Dixon .....	09258000	e24	1953-93.	--	--	--	--	
Muddy Creek:								
Cow Creek:								
Dry Cow Creek near Baggs .....	09258200	49.7	--	1970-81.	1976-78.	1975-79.	--	
Little Robber Reservoir.....	09258500	b8.5	1954-62d.	--	--	--	--	
Muddy Creek above Baggs .....	09258900	1,178	--	1958-71.	1976;1978.	1976;1978.	1976.	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b><u>COLORADO RIVER BASIN--continued</u></b>								
<b>GREEN RIVER BASIN--continued</b>								
Green River--continued								
Yampa River--continued								
Little Snake River--continued								
Muddy Creek--continued								
Muddy Creek near Baggs.....	09259000	e1,257	1915-16;1918;1987-91.	--	1957-58; 1985.	1988-91.	1985.	
Little Snake River below Baggs.....	09259050	--	--	--	1980-	1989-	1981-89.	
Fourmile Creek (at Ryan's Ranch) near Baggs .....	09259500	e4	1911-23.	--	--	--	--	
Little Snake River near Baggs .....	09259700	e3,020	1961-68.	--	1965-80.	1977.	1977.	
Little Snake River near Lily, Colo .....	09260000	e3,730	1904;1921-	--	--	--	--	
<b><u>GREAT SALT LAKE BASIN</u></b>								
<b>BEAR RIVER BASIN</b>								
Bear River:								
East Fork Bear River near Evanston .....	10010400	34.6	1973-86.	--	--	--	--	
Hilliard-East Fork Canal near State line, near Evanston .....	10010500	--	1941-79.	--	--	--	--	
Diversions from Bear River above gaging station, near Utah-Wyoming State line .....	10011000	--	1944-47j;1953-56j; 1958-k.	--	--	--	--	
West Fork Bear River at Whitney Dam, near Oakley, Utah .....	10011200	6.79	1963-86.	--	--	--	--	
West Fork Bear River below Deer Creek, near Evanston	10011400	52.2	1973-86.	--	--	--	--	
Bear River near Utah-Wyoming State line.....	10011500	172	1942-	--	--	--	--	
Mill Creek at Utah-Wyoming State line .....	10012000	59	1949-62.	--	--	--	--	
Mill Creek near Evanston .....	10012500	60.6	1942-48.	--	--	--	--	
Diversions from Mill Creek .....	10013000	--	1944-45j.	--	--	--	--	
Mill Creek below diversions, near Evanston .....	10013500	--	1946-47j.	--	--	--	--	
Bear River above Sulphur Creek, near Evanston .....	10014000	282	1946-56.	--	--	--	--	
Sulphur Creek above diversions, near Evanston.....	10014500	--	1945k.	--	--	--	--	
Willow Creek above diversion, near Evanston .....	10015000	--	1945k.	--	--	--	--	
Diversions from Sulphur Creek and Willow Creek ....	10015500	--	1944-45j.	--	--	--	--	
Sulphur Creek above reservoir, near Evanston .....	10015700	64.2	1957-97.	--	--	--	--	
Sulphur Creek below reservoir, near Evanston.....	10015900	69.2	1958-92; 1996-97.	--	--	--	--	
Sulphur Creek near Evanston .....	10016000	80.5	1942-59.	--	--	--	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>GREAT SALT LAKE BASIN--continued</b>							
<b>BEAR RIVER BASIN--continued</b>							
Bear River--continued							
Sulphur Creek--continued							
Bear River at Millis, near Evanston .....	10016500	420	1942-46.	--	--	--	--
Bear River at Evanston .....	10016900	433	1984-	--	1986;1989.	1988-89.	--
Yellow Creek near Evanston.....	10017000	79.2	1944-45;1949-78.	--	--	--	--
Coyote Creek near Evanston.....	10017500	e28	1942-45.	--	--	--	--
Diversions from Yellow Creek.....	10018000	--	1944-45j.	--	--	--	--
Yellow Creek below diversions, near Evanston.....	10018500	--	1946-47j.	--	--	--	--
Yellow Creek at mouth, near Evanston.....	10018900	--	--	--	1983-89.	--	1983-89.
Bear River near Evanston .....	10019000	715	1913-56.	--	--	--	--
Chapman Canal at State line, near Evanston .....	10019500	--	1942-86.	--	--	--	--
Whitney Canyon Creek near Evanston .....	10019700	8.93	--	1965-81.	--	--	--
Diversions from Bear River between State line and Woodruff gaging stations.....	10020000	--	1944-47j;1953-56j; 1958-k.	--	--	--	--
Bear River above reservoir, near Woodruff, Utah .....	10020100	752	1961-	--	1968-	1989-	1978-89.
Woodruff Narrows Reservoir near Woodruff, Utah .....	10020200	784	1965-96.	--	--	--	--
Bear River below reservoir, near Woodruff, Utah.....	10020300	784	1961-	--	--	--	--
Bear River near Woodruff, Utah .....	10020500	e870	1941-61.	--	--	--	--
Bear River near Randolph, Utah .....	10026500	1,616	1943-92.	--	--	--	--
Twin Creek:							
Rock Creek near Fossil .....	10026800	49.0	1961-66.	--	--	--	--
Twin Creek tributary near Sage .....	10026850	2.91	--	1965-70.	--	--	--
Twin Creek at Sage .....	10027000	246	1943-62;1976-81.	--	1958;1961; 1967-69; 1975-82; 1990-	1976-81; 1989-	1975-80.
Twin Creek Canal near Sage.....	10027500	--	1944-45j.	--	--	--	--
Diversions from Bear River between Randolph and below Pixley Dam gaging stations .....	10028000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Bear River below Pixley Dam, near Cokeville (near Cokeville) .....	10028500	2,032	1941-43;1952-56;1958-	--	--	--	--

Footnotes at end of table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>GREAT SALT LAKE BASIN--continued</b>							
<b>BEAR RIVER BASIN--continued</b>							
Bear River--continued							
Leeds Creek near Cokeville .....	10029000	--	1944j.	--	--	--	--
Bear River above Sublette Creek, near Cokeville .....	10029500	e2,110	1948-55.	--	--	--	--
Sublette Creek near Cokeville .....	10030000	--	1944-45j;1955-56j; 1958-k.	--	--	--	--
Smiths Fork near Afton .....	10030300	1.62	--	1964-70.	--	--	--
Smiths Fork near Smoot .....	10030500	17.3	1943.	--	--	--	--
Smiths Fork above Hobble Creek, near Geneva, Idaho .	10031000	--	1944-46j.	--	--	--	--
Smiths Fork near Border.....	10032000	165	1942-	--	--	--	--
Coal (Howland) Creek near Cokeville.....	10032500	--	1944-48j;1953-56j.	--	--	--	--
Muddy Creek above Mill Creek, near Cokeville .....	10032700	20.7	1965-69.	--	--	--	--
Mill Creek near Cokeville.....	10032800	8.07	1966-69.	--	--	--	--
Grade Creek near Cokeville.....	10033000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Pine Creek above diversions, near Cokeville.....	10033500	--	1944-48j;1953-56j; 1958-65k.	--	--	--	--
Diversions from Pine Creek .....	10034000	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Bruner Creek above Covey Canal, near Cokeville .....	10034500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Smiths Fork at Cokeville .....	10035000	275	1942-52.	--	1985-88; 1990-92; 1994-	1989-92; 1993-	--
Spring Creek above Covey Canal, near Cokeville.....	10035500	--	1944-48j;1953-56j; 1958-k.	--	--	--	--
Spring Creek to Collette Creek, near Cokeville.....	10036000	--	1944-48j;1953-56j.	--	--	--	--
Birch Creek near Cokeville.....	10036500	--	1944-45k.	--	--	--	--
Garrett Springs:							
Hickman Canal near Cokeville .....	10037000	--	1944-48j.	--	--	--	--
George Bourne Canal near Cokeville .....	10037500	--	1944-48j.	--	--	--	--
Bear River below Smiths Fork, near Cokeville.....	10038000	2,447	1954-	--	1993-	1996-98; 2001-	1993-

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b><u>GREAT SALT LAKE BASIN--continued</u></b>								
<b>BEAR RIVER BASIN--continued</b>								
Bear River--continued								
Chalk Creek:								
Chalk Creek Canal near Cokeville.....	10038500	--	1944-45j.	--	--	--	--	
Diversions from Bear River between Pixley Dam and Border gaging stations, and from Smiths Fork and its tributaries .....	10039000		1944-48j;1953-56j; 1958-k.	--	--	--	--	
Bear River at Border.....	10039500	2,486	1937-	--	1961; 1965-95.	1978-84; 1986-93.	1973-89.	
Thomas Fork near Geneva, Idaho .....	10040000	45.3	1939-51.	--	--	--	--	
Thomas Fork near Wyoming-Idaho State line .....	10041000	113	1949-92.	--	--	--	--	
Sheep Creek:								
Sheep Creek tributary near Border .....	10043300	.12	--	1961-64.	--	--	--	
Sheep Creek tributary No. 2 near Border.....	10043350	.34	--	1965-71.	--	--	--	
<b><u>SNAKE RIVER BASIN</u></b>								
Snake River at south boundary of Yellowstone National Park.....								
	13010000	485	1913-25.	--	--	--	--	
Snow River above Jackson Lake, at Flagg Ranch.....	13010065	486	1987-	--	1987-	1987-	1987-93.	
Snow River above Jackson Lake, at Flagg Ranch.....	13010200	486	1983-87.	--	1972; 1975-76; 1983-88.	--	1976.	
Pilgrim Creek near Moran.....	13010450	--	1997.	--	--	--	--	
Jackson Lake near (at) Moran .....	13010500	807	1908-79;1984-2000.	--	--	--	--	
(South Fork) Snow River near (at) Moran .....	13011000	807	1903-	--	--	--	--	
Pacific Creek at (near) Moran .....	13011500	169	1906;1917-18;1944-75; 1978-	--	1987-93.	1987-93.	--	
Buffalo Fork:								
Blackrock Creek:								
Blackrock Creek tributary near Moran .....	13011800	.80	--	1964-74.	--	--	--	
Buffalo Fork above Lava Creek, near Moran.....	13011900	323	1965-	--	1971; 1973-78.	--	--	
Buffalo Fork (River) near Moran (Elk) .....	13012000	378	1906a;1917-18; 1944-60.	--	--	--	--	

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b><u>SNAKE RIVER BASIN--continued</u></b>								
Snake River--continued								
Spread Creek at diversion dam, near Moran .....	13012490	97.4	1994-96.	--	--	--	--	
Spread Creek near Moran (Elk) .....	13012500	101	1917-18;1993-95.	--	1971-72; 1976;1990.	1990.	1976.	
Cottonwood Creek near Teton.....	13013000	72.3	1917-18.	--	--	--	--	
Spring Creek near Teton .....	13013500	--	1917-18.	--	--	--	--	
Snake River at Moose .....	13013650	1,677	1995-	--	1995-	1995-	--	
Cottonwood Creek:								
Spring Creek near Zenith.....	13014000	--	1917-18.	--	--	--	--	
Gros Ventre River at Kelly .....	13014500	622	1918;1944-58.	--	--	--	--	
Gros Ventre River at Zenith.....	13015000	683	1917-18;1987-	--	--	--	--	
Spring Creek at Zenith.....	13015500	--	1917-18.	--	--	--	--	
Spring Creek at West Gros Ventre Butte .....	13016000	--	1918.	--	--	--	--	
Snake River near Wilson.....	13016100	2,342	1972-75.	--	--	--	--	
<b>FISH CREEK BASIN</b>								
Fish Creek:								
Lake Creek below Granite Creek Supplement, near Moose .....	13016240	22.2	1995-99.	--	--	--	--	
Granite Creek above Granite Creek Supplement, near Moose .....	13016305	14.9	1995-	--	--	--	--	
Granite Creek Supplement above Lake Creek, near Moose .....	13016310	--	1995-99.	--	--	--	--	
Granite Creek Supplement below Lake Creek, near Moose .....	13016315	--	1995-99.	--	--	--	--	
Fish Creek at Wilson .....	13016450	71.2	1994-	--	--	--	--	
Fish Creek near Wilson .....	13016500	87.4	1917-18.	--	--	--	--	
Mosquito Creek near Wilson.....	13017000	24.2	1917-18.	--	--	--	--	
Big Spring Creek near Cheney .....	13017500	--	1918.	--	--	--	--	
<b>FLAT CREEK BASIN</b>								
Flat Creek near Jackson .....	13018000	40.1	1933-41;1989-93.	1994-96.	1966;1973.	--	--	
Cache Creek near Jackson .....	13018300	10.6	1962-	--	1965-96.	1968-96.	1969; 1973-96.	
Flat Creek below Cache Creek, near Jackson .....	13018350	129	1989-96;1999-	--	1973.	--	--	
Flat Creek near Cheney .....	13018500	142	1917-18;1989-93.	1994-96.	1981-82.	--	1981-82.	
Snake River below Flat Creek, near Jackson .....	13018750	2,627	1975-	--	--	--	--	

Footnotes at end of the table.

DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year				
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology
<b>SNAKE RIVER BASIN--continued</b>							
Snake River--continued							
Horse Creek near Cheney.....	13019000	37.9	1917-18.	--	--	--	--
<b>HOBACK RIVER BASIN</b>							
Hoback River:							
Rim Draw (Fish Creek) near Bondurant.....	13019210	3.41	--	1964-74.	--	--	--
Sour Moose Creek near Bondurant.....	13019220	2.77	--	1964-81.	--	--	--
North Fork Fish Creek near Bondurant .....	13019280	14.4	--	1964-69.	--	--	--
Cliff Creek near Bondurant .....	13019400	58.6	--	1964-74.	--	--	--
Granite Creek near Bondurant .....	13019430	--	--	--	1983-90.	1983-90.	--
Little Granite Creek at mouth, near Bondurant .....	13019438	21.1	1981-92.	--	1981-90.	1981-90.	1981-90.
Hoback River near Jackson (Cheney) .....	13019500	564	1917-18;1944-58.	--	--	--	--
Fall (Coburn) Creek near Jackson (Cheney) .....	13020000	46.8	1917-18.	1964-74.	--	--	--
Snake River at Astoria Mineral Hot Springs .....	13020300	--	--	--	1992.	--	--
Dog Creek near Cheney .....	13020500	14.1	1917-18.	--	--	--	--
Cabin Creek near Jackson (Cheney) .....	13021000	8.71	1917-18.	1964-74.	--	--	--
Bailey Creek near Alpine, Idaho (Wyo.).....	13021500	15.9	1917-18.	--	--	--	--
West Table Creek near Alpine.....	13021700	1.06	--	1964-69.	--	--	--
Wolf Creek near Alpine, Wyo. (Idaho) .....	13022000	13.1	1917-18.	1964-67.	--	--	--
Snake River above reservoir, near Alpine .....	13022500	3,465	1937-39;1953-	--	1965-86; 1988.	1974-77.	1973-80.
<b>RED CREEK BASIN</b>							
Red Creek near Alpine .....	13022550	3.88	--	1964-73.	--	--	--
<b>COTTONWOOD CREEK BASIN</b>							
Cottonwood Creek near Alpine.....	13022570	2.40	--	1964-72.	--	--	--
<b>GREYS RIVER BASIN</b>							
Greys River above reservoir, near Alpine (near Alpine, Idaho) .....	13023000	448	1917-18;1937-39;1953-	--	--	--	--
Snake River below Greys River, at Alpine, Idaho.....	13023500	3,940	1944-54.	--	--	--	--
<b>SALT RIVER BASIN</b>							
Salt River:							
Fish Creek near Smoot .....	13023800	e3.60	--	1964-74.	--	--	--
Salt River near Smoot.....	13023900	47.8	1932-57.	--	1981-85.	--	--
Cottonwood Creek near Smoot.....	13024500	26.3	1932-57.	--	--	--	--
Swift Creek near Afton.....	13025000	27.4	1942-80.	--	1965; 1981-85.	--	--

Footnotes at end of table.

## DISCONTINUED AND ACTIVE SURFACE-WATER DISCHARGE, WATER-QUALITY, SEDIMENT, AND BIOLOGICAL STATIONS--Continued

Station name	Station number	Drainage area (square miles)	Period of record, by calendar year					
			Daily or monthly discharge or content	Annual peak discharge	Water quality	Sediment	Biology	
<b><u>SNAKE RIVER BASIN--continued</u></b>								
Snake River--continued								
<b><u>SALT RIVER BASIN--continued</u></b>								
Salt River--continued								
Crow Creek near Fairview .....	13025500	e115	1946-49;1961-67.	--	1965; 1983-84.	--	--	
Stump Creek near Auburn .....	13026000	103	1946-49.	--	1989-92.	--	--	
Salt River near Thayne .....	13026500	570	1932-33;1961-67.	--	--	--	--	
Strawberry Creek near Bedford .....	13027000	21.3	1932-43.	--	--	--	--	
Bear Canyon near Freedom .....	13027200	e3.3	--	1961-71.	--	--	--	
Salt River above reservoir, near Etna .....	13027500	829	1953-	--	1965-88; 1990-1992; 1994-	1989-93; 1998-	1970; 1973-81; 1989-92.	
Salt River near Alpine, Idaho .....	13028000	878	1917-18.	--	--	--	--	
Salt River at Wyoming-Idaho State line.....	13028500	890	1933-55.	--	--	--	--	
Salt River near Alpine .....	13029000	4,841	1916-18;1934.	--	--	--	--	
Salt River near Irwin, Idaho .....	13032500	5,225	1934-36;1939-41;1949-	--	--	--	--	
<b><u>HENRYS FORK BASIN</u></b>								
Falls River:								
Grassy Lake near Moran.....	13046500	10.4	1939-79.	--	--	--	--	
Boundary Creek near Bechler Ranger Station.....	13046680	86.9	1984-	--	--	--	--	
Conant Creek:								
Squirrel Creek:								
North Fork Squirrel Creek near Squirrel, Idaho...	13047800	2.40	1961-67.	--	--	--	--	

b Part of drainage area is noncontributing or does not contribute directly to surface runoff.

c Storm runoff for summer season only.

d Published in U.S. Geological Survey Water-Supply Paper 1475-I, Hydrology of Small Watersheds in Western States.

e Approximate.

f Published in reports of Department of Northern Affairs and National Resources, Canada.

g Published in U.S. Geological Survey Water-Supply Paper 1531, Hydrology of the Upper Cheyenne River Basin.

h Includes several sites on the reservoir.

i Approximately, includes area which is probably noncontributing.

j Published in U. S. Geological Survey Open-File Report of Bear River hydrometric data.

k Published in reports of Bear River Commission.



## INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), in cooperation with State, Tribal, county, municipal, and other Federal agencies, collects data each water year describing the water resources of Wyoming. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the USGS, the data are published annually in this report series entitled, "**Water Resources Data - Wyoming**".

Water resources data for water year 2001 for Wyoming in this volume consists of records of stage, discharge, and water quality of streams; and stage and contents of lakes and reservoirs. This report contains discharge records for 151 gaging stations; stage and contents for 12 lakes and reservoirs; and water quality at 33 gaging stations and 32 ungaged stations. Locations of streamflow-gaging stations and water-quality stations are shown in figure 1. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous measurements.

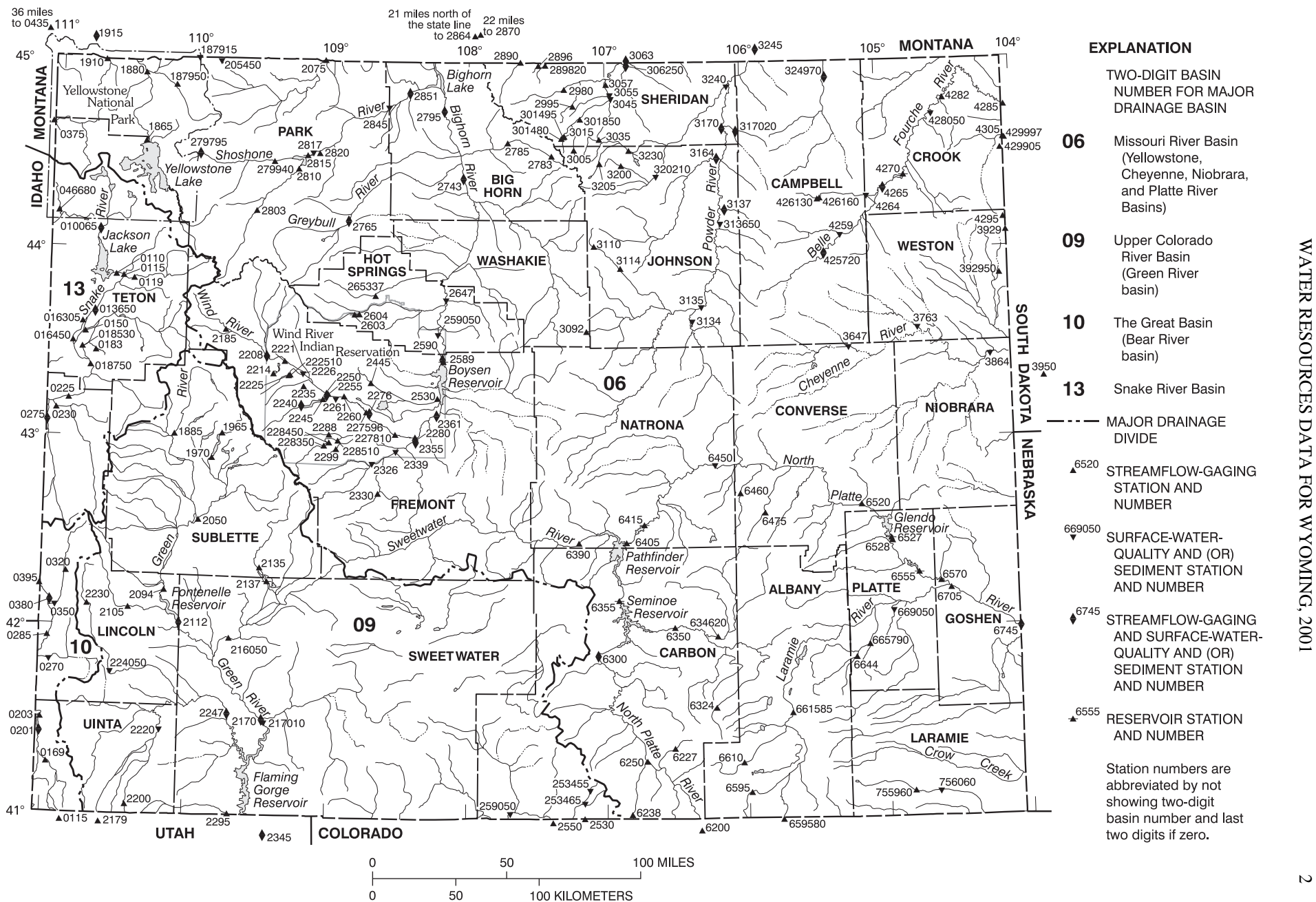
Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of USGS water-supply papers entitled "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities of the United States or may be purchased from USGS, Earth Science Information Center, Federal Center, Building 810, Box 25425, Denver, Colorado 80225.

For water years 1961 through 1970, streamflow data were released by the USGS in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water have been published in official USGS reports on a State-boundary basis. These official USGS reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "**U.S. Geological Survey Water-Data Report WY-01-1.**" These water-data reports are for sale, in paper copy or on microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page, by telephone at (307) 778-2931, or by email at [state\\_rep\\_wy@usgs.gov](mailto:state_rep_wy@usgs.gov). Hydrologic data for Wyoming is available on the World Wide Web at:

<http://wy.water.usgs.gov/>



**Figure 1.** Location of surface-water streamflow-gaging stations, water-quality stations, and reservoir stations, 2001 water year.

## COOPERATION

The USGS and organizations of the State of Wyoming have had cooperative agreements for the systematic collection of streamflow records since 1895, for measurement of ground-water levels since 1940, and for collection of water-quality samples since 1946. Agencies and organizations that assisted in data collection through cooperative agreements with the USGS during water year 2001 were:

### Federal Agencies

Bureau of Reclamation, U.S. Department of the Interior  
Bureau of Land Management, U.S. Department of the Interior  
National Park Service, U.S. Department of the Interior  
Corps of Engineers, U.S. Army

### Tribal Governments

Tribal Water Engineer, Shoshone and Northern Arapaho Tribes, Joint Business Council, Ivan Posey and Al Addison, Co-chairmen  
Wind River Environmental Quality Commission, Shoshone and Northern Arapaho Tribes, Joint Business Council, Ivan Posey and Al Addison, Co-chairmen

### State Agencies

Wyoming State Engineer's Office, Patrick T. Tyrrell, State Engineer  
Wyoming Department of Environmental Quality, Dennis Hemmer, Director  
Wyoming Water Development Commission, Lawrence Besson, Administrator

### Local Agencies

Teton Conservation District, Randy Williams, Executive Director  
Sheridan Area Water Supply Joint Powers Board, Bruce Yates, Administrator  
Big Sandy Conservation District, Ginger Eaton, District Coordinator  
Saratoga, Encampment, Rawlins Conservation District, Mark Shirley, District Coordinator  
Fremont County Weed and Pest Control District, Lars Baker, Supervisor

### Municipalities

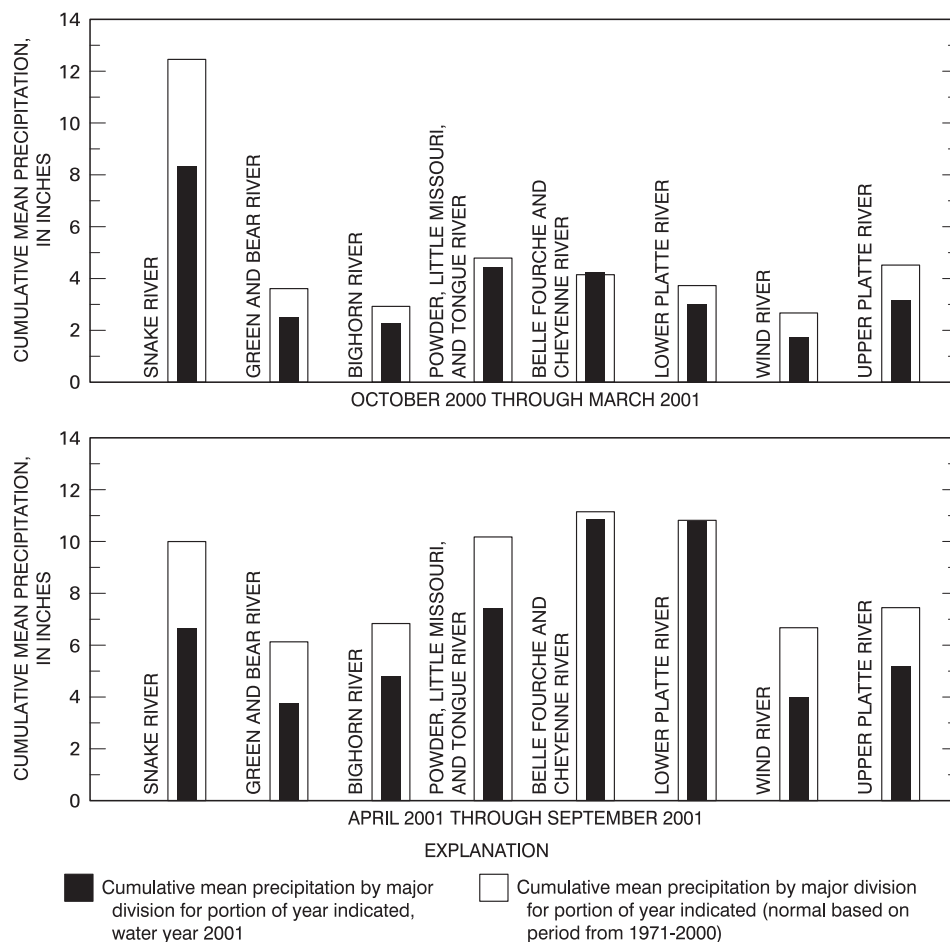
City of Cheyenne, Jack Spiker, Mayor  
City of Gillette, Frank Latta, Mayor  
City of Evanston, William Davis, Mayor

### SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation and snowpack were less than normal during water year 2001 throughout most of Wyoming. Streamflow at most streamflow-gaging stations in water year 2001 was less than normal with new minimum annual discharges observed at many stations. Specific conductance measurements in 2001 at five water-quality monitoring sites for four selected Wyoming streams (Shoshone River, Powder River, North Platte River, and Blacks Fork) were within the range of measurements for the 10-year period preceding water year 2001. The maximum specific conductance measurements for water year 2001 at two water-quality monitoring sites in the Green and Bear River basins exceeded all measurements collected in the previous 10-year period.

#### Precipitation

Drought conditions persisted through a second year in Wyoming. Precipitation was less than normal (average for 1971-2000) during water year 2001 throughout most of the State. Precipitation and departures from normal for the major divisions, as defined by the National Oceanic and Atmospheric Administration, are published monthly in "Climatological Data, Wyoming." The divisional data from water year 2001 were separated into two time periods (October 2000 through March 2001, and April through September 2001) representing periods of snow accumulation and snowmelt/rainfall for water year 2001 and compared to normal precipitation for the same periods (fig. 2). Precipitation for both October 2000 through March 2001 and April through September 2001 was less than normal in Wyoming, except for the October 2000 through April 2001 period for the Belle Fourche and Cheyenne River Basins and the Powder and Tongue River Basins; and April through September 2001 for the Lower Platte River Basin and Belle Fourche and Cheyenne River Basins, which were near normal.



**Figure 2.** Mean cumulative precipitation for water year 2001 and mean cumulative normal precipitation for 1971-2000 by major divisions, Wyoming.

Most of the precipitation data compiled for figure 2 are from stations in basin and plains areas of the State. Data from these stations might not be indicative of precipitation in the mountains. Most of the precipitation in the mountains is in the form of snow. Melting of the snowpack throughout the late spring and early summer provides most of Wyoming's annual water supply. Precipitation and snowpack is reported by the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) in "Wyoming Basin Outlook Reports."

Mountain snowpack as of May 1, 2001, prior to the normal intense snowmelt period, varied from much less than normal to near normal across the State. The Belle Fourche and Cheyenne River basins are at relatively lower elevations compared to other basins and snowmelt was essentially complete by May 1. The range of snowpack, in percent of average snow water equivalent, for stations in the major river divisions, as defined by the NRCS, in Wyoming as of May 1, 2001 is listed in table 1.

**Table 1.**--Summary of snowpack conditions in eight major river divisions in Wyoming for water year 2001

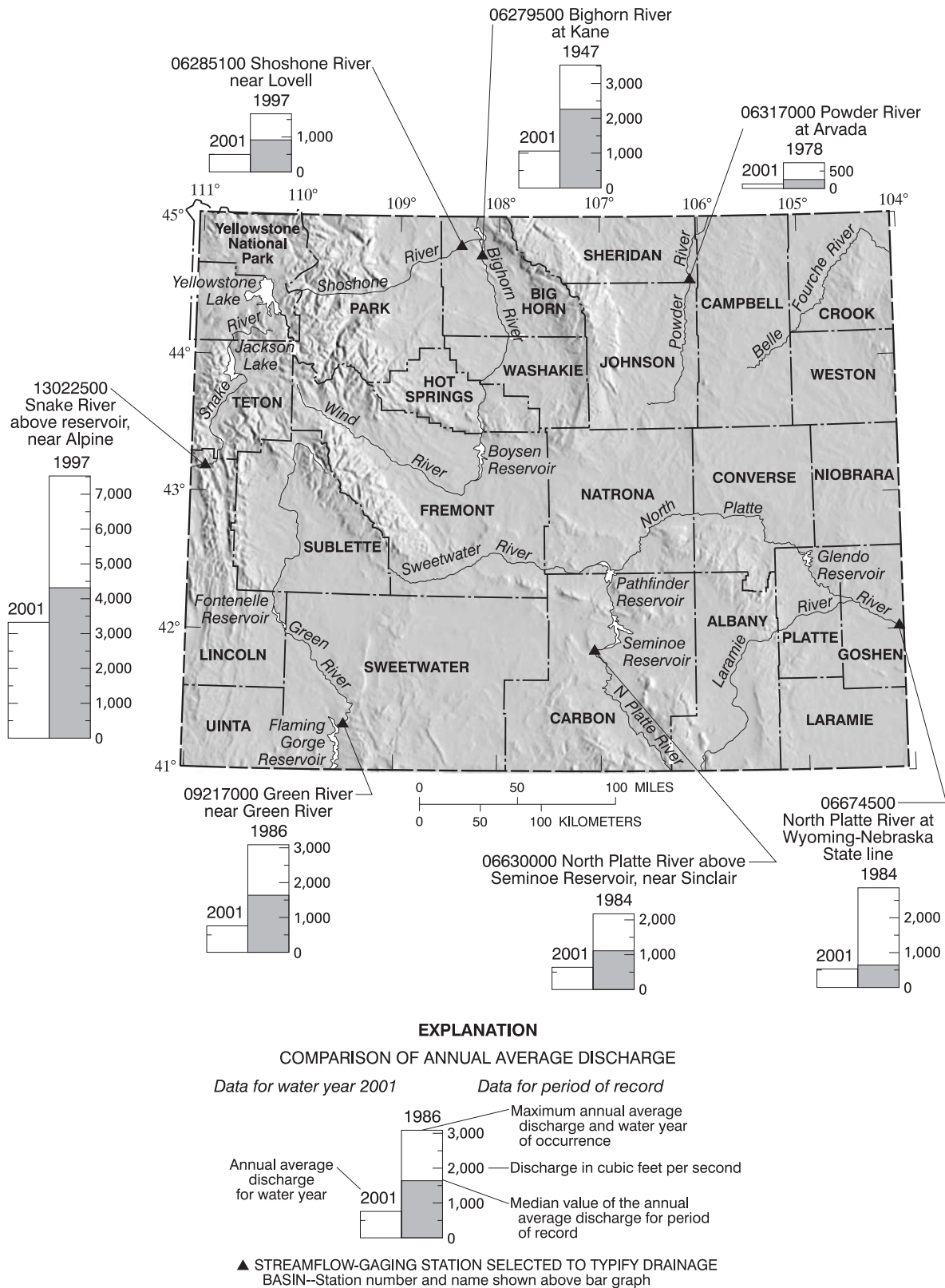
Major River Division	Range of snowpack, in percent of average snow water equivalent
	As of May 1, 2001
Snake River	36 to 63
Green and Bear River	44 to 88
Bighorn River	31 to 70
Powder and Tongue Rivers	47 to 69
Belle Fourche and Cheyenne Rivers	0
Lower Platte River	51 to 94
Wind River	27 to 58
Upper Platte River	75 to 86

### Streamflow

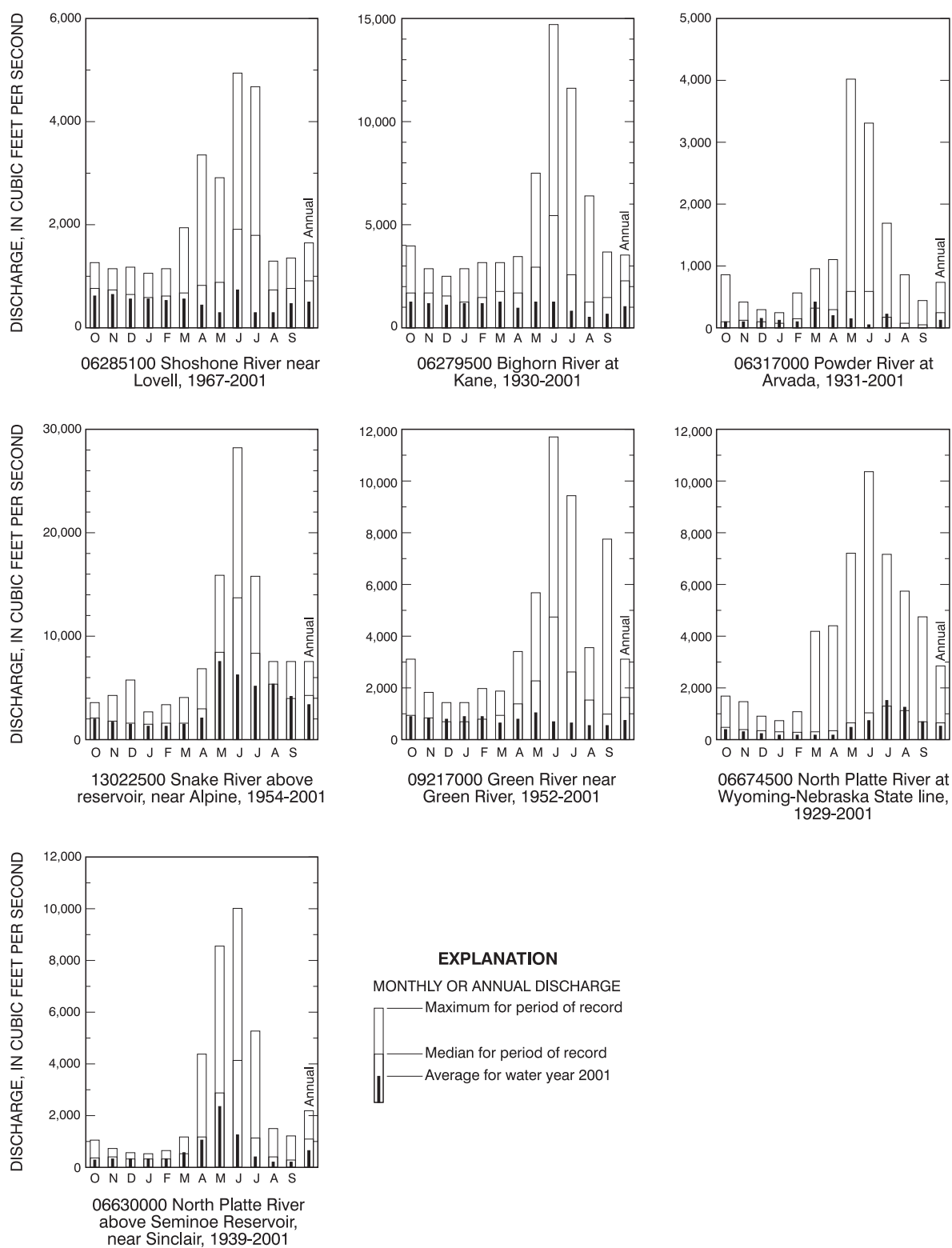
The USGS operates a network of streamflow stations throughout Wyoming in cooperation with numerous Federal, State, and local agencies. The network changes from year to year as objectives are achieved or changed, or funding is changed. Most of these stations are operated year round. Over time, the discharge record for these stations provide valuable data to describe hydrologic conditions and climate changes in the State.

Streamflow at most gaging stations across the State in water year 2001 was well below normal. For 96 selected gaging stations in and around Wyoming, 29 percent of the average annual discharges for water year 2001 were the lowest in the period of record and over 60 percent of the annual average discharges were at least the third lowest for the period of record. Average annual discharge for 06228000 Wind River at Riverton was the lowest in 86 years and 06235500 Little Wind River near Riverton was the lowest in 60 years. Many of these stations are affected by reservoir operations which can significantly affect streamflow characteristics. Streamflow statistics for 26 stations in and around Wyoming with little or no flow modification and 30 or more years of record were also examined. Six out of 26 (23 percent) stations set new record lows for annual mean discharge. Five of the six stations were located in the Bighorn Mountains including 06298000 Tongue River at Dayton with 70 years of record. Seven stations ranked second lowest and another four ranked third lowest for their periods of record.

Seven long-term index gaging stations, with periods of record ranging from 35 to 73 years, have been established for five of the major river basins in Wyoming. Streamflow statistics at these seven gaging stations are shown in figure 3. Average annual discharge at all seven gaging stations on major rivers in 2001 was less than the median average annual discharge for the period of record. The figure illustrates the shortage of snowpack and a relatively short and low snowmelt runoff period. Average annual discharge in 2001 for gaging stations 06285100 Shoshone River near Lovell, 06279500 Bighorn River at Kane, 09217000 Green River near Green River, and 13022500 Snake River above reservoir, near Alpine, was the third lowest for the period of record. Average annual discharge for 06317000 Powder River at Arvada and 06630000 North Platte River above Seminole Reservoir, near Sinclair ranked fifth and seven lowest for the period of record respectively. Even though 06674500 North Platte River at the Wyoming-Nebraska State line ranked only 23<sup>rd</sup> lowest for average annual discharge, all monthly average discharges, except July and August, were less than median monthly discharges for the period of record. These two months also reflect drought effects as higher flows in July and August were the result of water being released from upstream reservoirs for use by irrigators and reservoir operators downstream.



**Figure 3a.** Annual average discharge for water year 2001, and median and maximum annual average discharge for period of record for seven long-term index gaging stations in Wyoming.



**Figure 3b.** Average monthly and annual discharge for water year 2001, and median and maximum monthly and annual discharge for period of record for seven long-term index gaging stations in Wyoming.

### Chemical Quality of Stream Water

The USGS operates a network of water-quality stations throughout Wyoming in cooperation with numerous Federal, State, and local agencies. The network changes from year to year as objectives are achieved or changed, or funding is changed. The locations of water-quality monitoring network stations for water year 2001 are shown in figure 1. The sampling frequency varies from station to station, however most stations are sampled at least four times per year. Some stations have only a few years of water-quality information, while other stations have been in operation for many years and provide a basis for description of long-term conditions that represent a wide range of natural variability. Various water-quality measurements are made, either onsite or by laboratory analyses of samples, depending on the water-quality objectives of the investigation. Onsite stream measurements at stations generally include specific conductance, pH, water temperature, and dissolved oxygen. In addition, bacteria are sometimes analyzed in the field. Laboratory analyses in 2001 may include major ions, dissolved solids, nutrients, trace elements, organic compounds, or sediment.

The concentration of dissolved solids represents the total of all constituents dissolved in the water. Specific conductance typically varies directly with the dissolved-solids concentration; thus, specific conductance was chosen as an indicator of the concentration of dissolved solids in water. Concentrations of dissolved solids generally are inversely related to discharge. A statistical summary of specific conductance measurements from stream-water samples at seven stations for six selected streams in Wyoming describes the general chemical variability of the stream water during 2001 (table 2). The specific conductance varies considerably in Wyoming owing to the diverse geology of the State. The maximum value measured on these streams (2,960 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at 06317000 Powder River at Arvada; the minimum value measured (169 microsiemens per centimeter at 25 degrees Celsius) was from a sample collected at 06281700 Shoshone River above Demaris Springs.

To compare the current and long-term water-quality conditions, specific conductance measurements are summarized for water year 2001 and the 10-year period of water years 1991-2000. The range of specific conductance measurements is described by the minimum and maximum values. In addition, the central tendency of data collected over the 10-year period is described by the median (50th percentile). All specific conductance measurements in 2001 were within the range of measurements for the 10-year period of water years 1991-2000, except for two samples. The maximum specific conductance measurement (862 microsiemens per centimeter at 25 degrees Celsius) at 09217000 Green River near Green River and the maximum specific conductance measurement (682 microsiemens per centimeter at 25 degrees Celsius) at 10020100 Bear River above reservoir, near Woodruff in water year 2001 were greater than the maximum for the 10-year period of water years 1991-2000.



**Table 2.**--Statistical summary of specific conductance measurements for discrete water samples at selected locations for the 2001 and 1991-2000 water years.

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius]

Specific Conductance							
Station number and name	Number of values	Water Year 2001		Number of values	Water years 1991-2000		
		Maximum	Minimum		Maximum	Minimum	Median
06281700 Shoshone River above Demaris Springs, near Cody, WY	8	266	169	92	450	89	169
06317000 Powder River at Arvada, WY	9	2,960	1,560	47	3,770	744	2,100
06630000 North Platte River above Seminoe Reservoir, near Sinclair, WY	5	424	227	90	634	155	376
06674500 North Platte River at Wyoming-Nebraska State line	4	956	658	77	1,240	545	880
09217000 Green River near Green River, WY	6	862	496	72	827	270	503
09224700 Blacks Fork near Little America, WY	7	2,510	532	98	2,830	475	1,310
10020100 Bear River above reservoir, near Woodruff, UT	4	682	420	40	660	145	430

## SPECIAL NETWORKS AND PROGRAMS

**Hydrologic Benchmark Network** is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at:

<http://water.usgs.gov/hbn/>

**National Stream Quality Accounting Network** (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. From 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at:

<http://water.usgs.gov/nasqan/>

The **National Atmospheric Deposition Program/National Trends Network** (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at:

<http://bqs.usgs.gov/acidrain/>

The **National Water-Quality Assessment (NAWQA) Program** of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in over 50 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

The water quality in the Yellowstone river basin is presently being studied as part of the USGS NAWQA program. During the 2001 water year, the study conducted the final of three years of intensive data collection. Ground water and surface water are being sampled for an extensive list of natural and anthropogenic chemicals. Aquatic ecology, including stream morphology and aquatic plant and animal communities, are also being measured. All media are being sampled using a nationally consistent set of protocols, methods, and measurements. Most of the routine data (major ions, nutrients,

trace elements, and some pesticides) collected in Montana and Wyoming are included in this report. Other data not included in this report (additional pesticides, volatile organic compounds, stream morphology, populations of aquatic flora and fauna, and data for adjacent states) are available in the District offices.

The Yellowstone River basin study unit extends from central Wyoming north to include most of southeastern Montana and a small part of western North Dakota. The entire Yellowstone River watershed defines the study unit boundaries and includes all of the Wind/Bighorn, Powder, Tongue, and Clarks Fork Yellowstone tributary watersheds. Total area for the study unit is about 70,100 square miles (sq mi) of which 51 percent is in Montana, 48 percent is in Wyoming, and 1 percent is in North Dakota. Total population of the study unit was about 323,000 (1990 census), of which 206,000 were in Montana, 116,000 were in Wyoming, and 1,000 were in North Dakota.

The study unit lies within the Rocky Mountain System and Interior Plains physiographic divisions. Topography of the study unit in the Rocky Mountain System division varies from mountain ranges and high plateaus, including the Wind River Range, Bighorn Mountains, and Absaroka Plateau, to intermontane basins, such as the Wind River and Bighorn Basins. The highest elevations in the study unit are in the Wind River Range, where several peaks exceed 13,000 feet above sea level. The Interior Plains division part of the study unit varies from gently rolling plains to sharply dissected badlands. The lowest point in the study unit, 1,850 feet above sea level, is located at the mouth of the Yellowstone River in North Dakota.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

[http://water.usgs.gov/nawqa/nawqa\\_home.html](http://water.usgs.gov/nawqa/nawqa_home.html)

or for the Yellowstone Study at:

<http://wy.water.usgs.gov/YELL/index.htm>

## EXPLANATION OF THE RECORDS

The surface-water records published in this report are for water year 2001, which began October 1, 2000, and ended September 30, 2001. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for surface water. The locations of the stations where the data were collected are shown in figure 1. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station Identification Numbers

Each surface-water data station in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The system is used by the USGS to assign identification numbers for surface-water stations is based on geographic location. Generally, the "downstream-order" system is used for surface-water stations, and the "latitude-longitude" system is used in Wyoming for surface-water stations where only miscellaneous measurements are made.

### Downstream-Order System

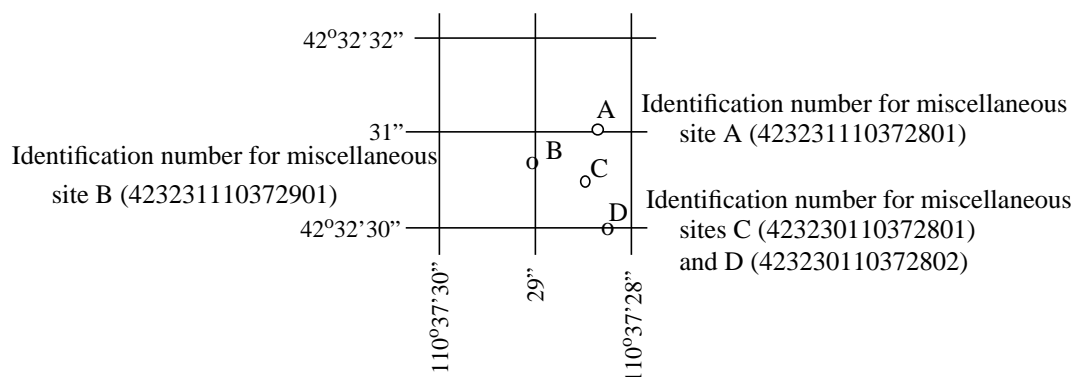
Since October 1, 1950, the order of listing hydrologic-station records in USGS reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the section "Surface-water stations, in downstream order, for which records are published in this volume" in the front of this report. Each indentation represents

one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned in downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06646000, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "646000." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

### Latitude-Longitude System

The identification numbers for miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of north latitude, the next seven digits denote degrees, minutes, and seconds of west longitude, and the last two digits (assigned sequentially) identify the order of sites if more than one within a 1-second grid. This site-identification number, once assigned, is arbitrary and has no locational significance. If the initial determination of latitude and longitude is found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See following figure.)



**Figure 4.** System for assigning identification numbers to miscellaneous sites using latitude and longitude.

### Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily reservoir storage and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Locations of all complete-record stations for which data are given in this report are shown in figure 1.

### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with electronic data loggers that store and/or transmit stage values by satellite telemetry. Measurements of discharge are made with current meters using methods adopted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in USGS Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by averaging the discharges determined from individual stages (gage heights) applied to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some streamgaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to obtain (from surveys) curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly incorrect as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so incorrect that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in sections "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

### Data Presentation

Streamflow data in this report are presented in a format considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table.

These changes represent the results of reformatting the annual water-data report to meet current user needs and data preferences.

The record published for each continuous-record surface-water discharge station (gaging station) consists of four parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

#### Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps and methods of determining drainage area become available.

**PERIOD OF RECORD.**--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that flow at it reasonably can be considered equivalent to flow at the present station.

**REVISED RECORDS.**--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

**REVISIONS.**--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

#### Data table of daily mean values

The daily table of discharge records for streamgaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Runoff for the month usually is expressed in acre-feet (line headed "AC-FT"). At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

#### Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS \_\_\_\_-\_\_\_\_, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

#### Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_\_\_\_-\_\_\_\_," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All statistics, except HIGHEST and LOWEST DAILY MEANS and INSTANTANEOUS PEAK FLOW and STAGE, are computed based on the period(s) using complete water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the footnotes. Selected streamflow duration curve statistics and runoff data also are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table. Other statistics, such as instantaneous low flow, annual runoff in cubic feet per square mile or in inches, may be available on request.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

**LOWEST DAILY MEAN.**--The minimum daily mean discharge for the year or for the designated period.

**ANNUAL 7-DAY MINIMUM.**--The lowest mean discharge for seven consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**INSTANTANEOUS PEAK FLOW.**--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

**INSTANTANEOUS PEAK STAGE.**--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

**ANNUAL RUNOFF.**--The total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

**10 PERCENT EXCEEDS.**--The discharge that has been exceeded 10 percent of the time for the designated period.

**50 PERCENT EXCEEDS.**--The discharge that has been exceeded 50 percent of the time for the designated period.

**90 PERCENT EXCEEDS.**--The discharge that has been exceeded 90 percent of the time for the designated period.

### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified by flagging individual daily values with the letter symbol "e" and printing a table footnote (e Estimated).

### Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures for more than 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. No rounding rules apply to discharges listed for miscellaneous sites. Discharges listed are those actually computed.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff because of the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation from artificial causes, or to other factors. For such stations, figures for cubic feet per second per square mile and for runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.



### Other Records Available

Records of daily diversions of water from streams by canals are collected by and published in Hydrographers Annual Reports of the Wyoming Board of Control. Included are discharge records for streams and storage records for reservoirs not published in USGS reports.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Wyoming District office. Also, daily mean discharges are available in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained at the address given on the back of the title page of this report.

### Records of Surface-Water Quality

Records of surface-water quality in this report represent a variety of data types and measurement or sampling and analysis frequencies. Whenever possible, records of surface-water quality are obtained at or near streamgaging stations because interpretation of surface-water quality and seasonal variation is enhanced by knowledge of corresponding discharge data. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where water-quality data are collected systematically over a period of years, but frequency of sampling usually is less than quarterly. A miscellaneous sampling site is a location where samples are collected one time or intermittently to provide better areal coverage for defining water-quality conditions over a broad area in a river basin.

A distinction needs to be made between "continuing records", as used in reference to data for continuing-record stations, and "continuous record," which refers to a continuous graph over time or a series of recorded discrete short-time-interval values. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, most water-quality data are obtained on a monthly or less frequent basis.

### Onsite Measurements and Sample Collection

When obtaining water-quality data, a major concern is assuring that onsite water-quality measurements and the samples collected for laboratory analysis are representative of the actual quality of the water. Measurements such as water temperature, pH, and dissolved oxygen are made onsite when the samples are collected because of the potential for significant change with time. Prescribed procedures need to be followed in collection and processing of samples. Procedures for onsite measurements and for collecting, treating, and shipping samples are documented in a series of Techniques of Water-Resources Investigations (TWRI) publications titled "National Field Manual for the Collection of Water-Quality Data." All of these references are listed under "TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from other references and from the Wyoming District office.

One sample can adequately define the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the sampler.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. If an apparent inconsistency exists between a reported pH value and a relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For water-quality stations equipped with electronic monitors and digital recorders, the record consists of a daily maximum, minimum, and mean values for each constituent measured and are based upon hourly recordings beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records of the individual hourly values (unit values) may be obtained from the Wyoming District office.

### Water Temperature

Water temperatures are measured at water-quality stations at the time of sampling. In addition, water temperatures are taken at the time of discharge measurements at streamgaging stations. For stations where water temperatures are measured manually once daily, the water temperatures are taken at about the same time each day for consistency in the record. Deep streams commonly have a small diurnal temperature change, whereas shallow streams may have a daily range of several degrees, which closely follows the changes in air temperature. The water temperature in some streams may be affected by industrial discharges of warm water.

For stations where recording instruments are used, the record consisting of either daily mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements and those taken manually once-daily are on file in the Wyoming District office.

### Sediment

Suspended-sediment concentrations are determined from samples collected using depth-integrating samplers. Samples usually are obtained from several verticals in the cross section. At daily sediment stations, daily samples may be obtained from a single vertical and a coefficient applied to determine the mean concentration in the cross section. Daily mean suspended-sediment concentrations are computed using sample concentrations and the continuous streamflow record according the methods described in TWRI Book 3, Chap. C3. Daily suspended-sediment discharge then is computed as the product of stream discharge times the daily mean concentration times a unit conversion factor of 0.0027.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration are computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between suspended-sediment concentration and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of particle-size distribution of the suspended sediment and bed material for periodic samples are included for some stations.

### Laboratory Analyses

Samples for indicator bacteria are analyzed locally. Samples for suspended-sediment are analyzed at the USGS laboratory in Helena, Montana. Samples for all other constituents are analyzed at the USGS National Water-Quality Laboratory in Lakewood, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1 and C3. Methods used by the National Water-Quality Laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

### Presentation of Water-Quality Records

Water-quality records collected at a streamgaging station are published immediately following the daily discharge record. Station number and name are the same for both records. Where a daily discharge record is not available or where the location of the water quality station differs significantly from that of the nearby streamgaging station, the water-quality record is published with its own station number and name in the standard downstream-order sequence.

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperating agencies, and extremes for parameters measured on a daily basis. Tables of chemical, physical, biological, and radiochemical data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, water temperature, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the streamgaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuing record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature monitor, pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the USGS computerized data system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

### Remark Codes

The following remark codes may appear with the water-quality data in this report:

#### PRINTED OUTPUT

#### REMARK

E	Estimated value
M	Presence of material verified, but not quantified
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
k	Results based on colony count outside the acceptable range (non-ideal colony count)

### Quality-Control Samples

Data generated from quality-control (QC) samples are used to evaluate the quality of the sampling and processing techniques, as well as data from the actual samples themselves. Interpretations of environmental sample data is aided when errors associated with sample measurements are known. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of QC data within the USGS. These procedures allow for identification of various types of QC data so that they can be related to corresponding environmental samples. Information on QC samples is on file in the Wyoming district office.

#### Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is free of the constituents of interest. Any detectable concentration of a constituent in the blank solution is believed to be due to contamination introduced at some point during sample collecting, processing, or analysis. There are many types of blank samples, each designed to test a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing, preservation, transportation, and laboratory handling as an environmental sample.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office using recently cleaned equipment).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated through a field splitter in the same manner and through the same apparatus used for splitting an environmental sample.

Preservation blank - a blank solution that is treated with the same preservatives used for an environmental sample.

#### Replicate Samples

Replicate samples are two or more sets of environmental samples collected in the same manner such that the samples are considered to be essentially identical in composition. Replicate samples are collected and analyzed to establish the amount of variability in the data, which can be contributed by either the collection or the analytical process or both. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential sample - a type of replicate sample in which the samples are collected one after the other, typically over a short time (pumped samples).

Split sample - a type of replicate sample in which a single composite sample is split into subsamples.

Concurrent sample - two sets of samples, collected independently, but at the same time and place.

#### Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

### **ACCESS TO WATER DATA**

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

<http://water.usgs.gov>

Some water-quality and ground-water data are also available through the WWW. In addition, data can be provided in various machine-readable formats. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District offices (See address on the back of the title page.)

## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units on the inside of the back cover.

**Acid neutralizing capacity** (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

**Adenosine triphosphate** (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algal growth potential** (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

**Annual runoff** is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 to September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**Aroclor** is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

**Artificial substrate** is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also “Substrate”)

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g/m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g/m}^2$ ). (See also “Biomass”)

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Base discharge (for peak discharge)** is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peaks per year will be published.

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced stream-flows. Natural base flow is sustained largely by ground-water discharge.

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 ft) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler may also contain a component of the suspended load.

**Bedload discharge** (tons per day) is rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload" and "Sediment")

**Bed material** is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Bottom material** (See "Bed material")

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements on cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

**Cfs-day** (See "Cubic foot per second-day")

**Chemical oxygen demand (COD)** is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

***Clostridium perfringens* (*C. perfringens*)** is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of waters and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure** as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second** (CFS,  $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-feet” sometimes is used synonymously with “cubic feet per second” but is now obsolete.

**Cubic foot per second-day** (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ ) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily-mean discharges reported in the daily-value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile** [CFSM,  $(\text{ft}^3/\text{s})/\text{mi}^2$ ] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

**Daily mean suspended-sediment concentration** is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Mean concentration of suspended sediment,” “Sediment,” and “Suspended-sediment concentration”)

**Daily-record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

**Data Collection Platform** (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.



**Discharge**, or flow, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediments or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents such as suspended sediment, bedload, and dissolved or suspended chemical constituents, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen (DO)** is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L  $\text{CaCO}_3$ ) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H)** (Shannon Index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also “Ash mass,” “Biomass,” and “Wet mass”)

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

**Enterococcus bacteria** are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also “Bacteria”)

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive, the index usually decreases with pollution.

***Escherichia coli* (*E. coli*)** are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Estimated (E) value** of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an ‘E’ code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an ‘E’ code even though the measured value is greater than the MDL. A value reported with an ‘E’ code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

**Euglenoids** (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also “Phytoplankton”)

**Extractable organic halides (EOX)** are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried streambed sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediments.

**Fecal coliform bacteria** are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Fecal streptococcal bacteria** are present in the intestine of warm-blooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Fire algae** (*Pyrrophyta*) are free-swimming unicells characterized by a red pigment spot. (See also “Phytoplankton”)

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly larger than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any National geodetic datum. However, if the elevation of the gage datum relative to the National datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the National datum by adding the elevation of the gage datum to the gage reading.

**Gage height** (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height is often used interchangeably with the more general term “stage,” although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

**Gas chromatography/flame ionization detector (GC/FID)** is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating “moss” in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also “Phytoplankton”)

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site:*  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index (HBI)** is an indicator of organic pollution which uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum (n)(a)}{N}$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See “Datum”)

**Hydrologic benchmark station** is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a benchmark station may be used to separate effects of natural from human-induced changes in other basins that have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped benchmark basin.

**Hydrologic index stations** referred to in this report are four continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also “Annual runoff”)

**Instantaneous discharge** is the discharge at a particular instant of time. (See also “Discharge”)

**Laboratory Reporting Level (LRL)** is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a non-detection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory collects quality-control data from selected analytical methods on a continuing basis to determine

LT-MDLs and to establish LRLs. These values are reevaluated annually based on the most current quality-control data and may, therefore, change. [Note: In several previous NWQL documents (Connor and others, 1998; NWQL Technical Memorandum 98.07, 1998), the LRL was called the non-detection value or NDV—a term that is no longer used.]

**Land-surface datum** (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0} .$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-Term Method Detection Level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site:*

<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge** (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

**Measuring point** (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method Detection Limit** (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances** (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram** (UG/G, µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram** (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter** (UG/L,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter** (US/CM,  $\mu\text{S/cm}$ ) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter** (MG/L,  $\text{mg/L}$ ) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum Reporting Level** (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method (Timme, 1995).

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

**Most probable number** (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter** (NG/L,  $\text{ng/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929** (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit** (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988** (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the U.S. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and U.S. first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon** (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass** or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter ( $\text{m}^2$ ), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter Code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation to the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition or percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

**Percent shading** is determined by using a clinometer to estimate left and right bank shading. The values are added together and divided by 180 to determine percent shading relative to a horizontal surface.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed “acidic,” and solutions with a pH greater than 7 are termed “basic.” Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae. (See also “Plankton”)

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

**Polychlorinated biphenyls (PCBs)** are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes (PCNs)** are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. Carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. Oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

**Radioisotopes** are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Recoverable from bed (bottom) material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also “Bed material”)

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See “Recurrence interval”)

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council, and typically used to denote location along a river.

**Runoff** is the quantity of water that is discharged (“runs off”) from a drainage basin in a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums, (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums. See conversion of units page (inside back cover) for identification of the datum used in this report.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Seven-day 10-year low flow** ( $7Q_{10}$ ) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-run average. The recurrence interval of the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also “Recurrence interval” and “Annual 7-day minimum”)

**Sodium adsorption ratio** (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See “Gage height”)



**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term “discharge” can be applied to the flow of a canal, the word “streamflow” uniquely describes the discharge in a surface stream course. The term “streamflow” is more general than “runoff” as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate Embeddedness Class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as percent covered by fine sediment:

0	< no gravel or larger substrate		
1	> 75%		
2	51-75%	4	5-25%
3	26-50%	5	< 5%

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 ft) of the bed material such as that material which is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is operationally defined as the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

**Suspended-sediment discharge** (tons/day) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as “suspended, total.”

Determinations of “suspended, total” constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Synoptic studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxa richness** is the total number of distinct species or groups and usually decreases with pollution. (See also “Percent Shading”)

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

#### **Temperature preferences:**

Cold – preferred water temperature for the species is less than 20 °C or spawning temperature preference less than 16 °C and native distribution is considered to be predominantly north of 45° N. latitude.

Warm – preferred water temperatures for the species is greater than 20 °C or spawning temperature preference greater than 16 °C and native distribution is considered to be predominantly south of 45° N. latitude.

Cool – intermediate between cold and warm water temperature preferences.

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term “temperature recorder” is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot (T/acre-ft)** is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day (T/DAY, tons/d)** is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent’s physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total.” (Note that the word “total” does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as “total in bottom material.”

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume.”)

**Total recoverable** is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Sediment,” “Suspended sediment,” “Suspended-Sediment Concentration,” “Bedload,” and “Bedload discharge”)

**Total sediment load** or total load is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-Sediment Load,” and “Total load”)

#### **Trophic group:**

**Filter feeder** – diet composed of suspended plant and/or animal material.

**Herbivore** – diet composed predominantly of plant material.

**Invertivore** – diet composed predominantly of invertebrates.

**Omnivore** – diet composed of at least 25-percent plant and 25-percent animal material.

**Piscivore** – diet composed predominantly of fish.

**Turbidity** is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and differ-

ent instruments are unlikely to yield equivalent values. Consequently, the method of measurement and type of instrument used to derive turbidity records should be included in the “REMARKS” column of the Annual Data Report.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

**Vertical datum** (See “Datum”)

**Volatile organic compounds (VOCs)** are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

**Water table** is the level in the saturated zone at which the pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which is found the water table.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2001, is called the “2001 water year.”

**WDR** is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

**WSP** is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also “Plankton”)

## TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The U.S.G.S. publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S.G.S., Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be made in the form of a check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

### Book 1. Collection of Water Data by Direct Measurement

#### Section D. Water Quality

- 1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

### Book 2. Collection of Environmental Data

#### Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

#### Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

#### Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

### Book 3. Applications of Hydraulics

#### Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3. chap. A5. 1967. 29 p.

- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

#### **Section B. Ground-Water Techniques**

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.

- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

### **Section C. Sedimentation and Erosion Techniques**

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

## **Book 4. Hydrologic Analysis and Interpretation**

### **Section A. Statistical Analysis**

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

### **Section B. Surface Water**

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

### **Section D. Interrelated Phases of the Hydrologic Cycle**

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

## **Book 5. Laboratory Analysis**

### **Section A. Water Analysis**

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greenson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

### **Section C. Sediment Analysis**

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

## **Book 6. Modeling Techniques**

### **Section A. Ground Water**

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5, 1996. 125 p.

## **Book 7. Automated Data Processing and Computations**

### **Section C. Computer Programs**

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

## **Book 8. Instrumentation**

### **Section A. Instruments for Measurement of Water Level**

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

### **Section B. Instruments for Measurement of Discharge**

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

## **Book 9. Handbooks for Water-Resources Investigations**

### **Section A. National Field Manual for the Collection of Water-Quality Data**

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibbs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999. 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



MISSOURI RIVER BASIN  
MADISON RIVER BASIN  
06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT

LOCATION.--Lat 44°39'25", long 111°04'03", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.36, T.13 S., R.5 E., Gallatin County, Hydrologic Unit 10020007, Yellowstone National Park, on left bank 0.7 mi downstream of Montana-Wyoming stateline, 1.5 mi east of West Yellowstone, 16.4 mi downstream from Gibbon River, and at river mile 132.7.

DRAINAGE AREA.--420 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1913 to December 1917, July 1918 to October 1921, June 1922 to September 1973, August 1983 to September 1986, October 1988 to current year. Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 6,650 ft above sea level, from topographic map. Prior to Oct. 20, 1918, nonrecording gage, and Oct. 20, 1918 to June 29, 1930, nonrecording gage or water-stage recorder at sites 2.5 mi upstream at different datums. U. S. Geological Survey satellite telemeter at station. Supplementary nonrecording gage at site 0.3 mi downstream at different datum used at time during 1927-30.

REMARKS.--Records good. No regulation or diversions upstream from station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	478	467	431	429	408	410	428	719	483	398	374	369
2	525	442	426	420	410	408	436	626	475	393	369	362
3	468	433	432	423	410	413	435	582	474	392	372	359
4	455	434	429	424	412	407	432	589	496	391	379	358
5	448	444	429	422	421	408	425	630	497	396	375	364
6	442	440	426	419	423	408	423	646	496	395	369	374
7	440	426	430	413	419	413	423	614	477	397	369	372
8	440	425	431	412	393	415	435	629	460	403	369	373
9	440	438	432	419	418	416	420	726	449	433	369	369
10	443	432	436	426	421	422	417	716	439	481	369	365
11	473	426	430	423	418	417	413	685	431	433	371	363
12	496	427	425	424	411	410	416	678	465	420	369	361
13	496	424	431	423	415	406	422	699	511	405	373	369
14	479	422	439	423	408	412	430	708	533	404	388	376
15	476	430	438	421	412	408	416	860	585	409	388	376
16	471	426	423	411	415	407	424	1490	502	414	381	370
17	466	423	445	411	415	406	429	1100	464	403	379	380
18	465	423	437	419	416	404	470	848	455	398	374	369
19	465	423	433	418	416	407	533	743	444	393	369	369
20	459	418	436	422	418	444	521	686	435	390	367	366
21	465	421	425	412	422	460	503	627	429	387	368	363
22	465	422	446	418	423	454	479	590	423	382	368	363
23	452	419	438	418	423	451	461	570	417	381	368	363
24	449	420	439	412	423	454	455	555	413	381	366	362
25	452	424	437	419	417	463	490	542	409	379	363	361
26	452	429	429	416	412	463	545	553	408	376	363	363
27	448	434	431	409	408	446	602	541	410	375	362	358
28	453	433	428	407	402	437	640	573	405	374	363	360
29	454	425	420	408	---	435	715	602	402	370	363	361
30	455	443	429	409	---	437	663	529	399	372	361	360
31	480	---	430	405	---	421	---	496	---	371	365	---
TOTAL	14350	12893	13391	12935	11609	13162	14301	21152	13686	12296	11483	10978
MEAN	463	430	432	417	415	425	477	682	456	397	370	366
MAX	525	467	446	429	423	463	715	1490	585	481	388	380
MIN	440	418	420	405	393	404	413	496	399	370	361	358
AC-FT	28460	25570	26560	25660	23030	26110	28370	41950	27150	24390	22780	21770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2001, BY WATER YEAR (WY)\*

	MEAN	435	425	417	405	400	406	497	854	818	501	434	428
	MAX	710	697	641	586	572	539	671	1725	1479	917	759	704
	(WY)	1914	1914	1997	1997	1914	1917	1925	1997	1997	1913	1913	1913
	MIN	297	297	304	304	303	313	369	388	341	282	273	282
	(WY)	1935	1932	1932	1932	1932	1943	1941	1934	1931	1931	1934	1934

## MADISON RIVER BASIN

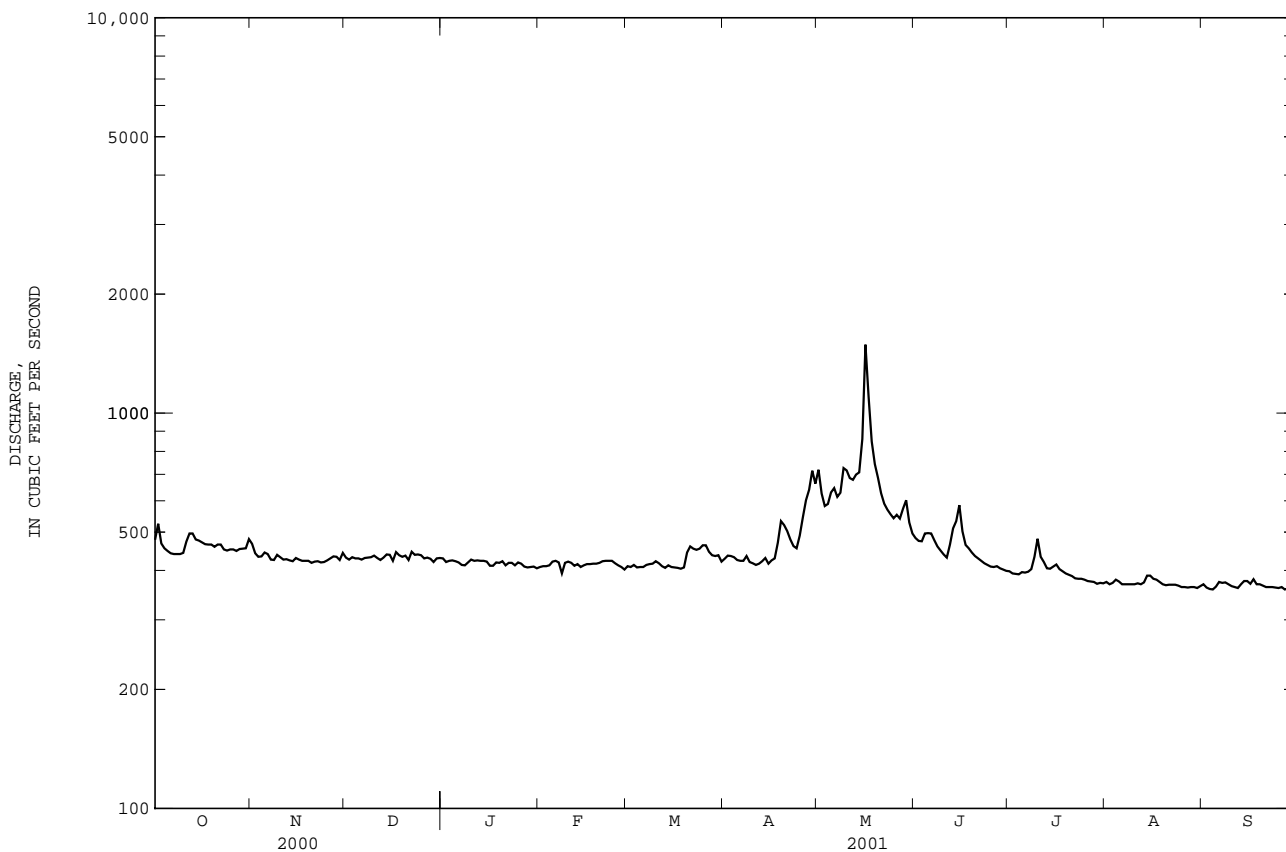
06037500 MADISON RIVER NEAR WEST YELLOWSTONE, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1913 - 2001*	
ANNUAL TOTAL	194972		162236		--	
ANNUAL MEAN	533		444		500	
HIGHEST ANNUAL MEAN	--		--		789	1997
LOWEST ANNUAL MEAN	--		--		337	1934
HIGHEST DAILY MEAN	1350	May 26	1490	May 16	2750	May 18 1996
LOWEST DAILY MEAN	409	Aug 23	358	Sep 4	245	Jan 1 1942
ANNUAL SEVEN-DAY MINIMUM	414	Aug 20	361	Sep 24	267	Aug 6 1931
MAXIMUM PEAK FLOW	--		1600	May 16	2820 <sup>a</sup>	May 18 1996
MAXIMUM PEAK STAGE	--		2.96	May 16	10.00 <sup>b</sup>	Jan 8 1937
ANNUAL RUNOFF (AC-FT)	386700		321800		362500	
10 PERCENT EXCEEDS	781		533		750	
50 PERCENT EXCEEDS	471		423		434	
90 PERCENT EXCEEDS	424		369		339	

\* For period of operation.

a Gage height, 3.78 ft.

b About, backwater from ice.



## 06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT

LOCATION.--Lat 45°29'51", long 111°16'11" in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.7, T.4 S., R.4 E., Gallatin County, Hydrologic Unit 10020008, on left bank 0.3 mi downstream from Spanish Creek, 7.3 mi south of Gallatin Gateway and at river mile 47.7.

DRAINAGE AREA.--825 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1889 to September 1894, June 1930 to September 1969, annual maximum, water years 1970-71, October 1971 to September 1981, October 1984 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as West Gallatin River near Bozeman 1889-94.

REVISED RECORDS.--WSP 1389: 1892(M), 1893-94. WSP 1559: Drainage area. WDR MT-85-1 (M).

GAGE.--Water-stage recorder. Datum of gage is 5,167.67 ft above sea level. Prior to Oct. 20, 1932, nonrecording gages at several different sites and datums within 0.8 mi of present site.

REMARKS.--Records good. Diversions for irrigation of about 1,400 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	528	410	318	308	287	260	300	1180	1610	1010	479	335
2	557	377	303	295	286	268	299	959	1650	965	454	330
3	464	325	290	279	291	271	295	821	1670	914	440	327
4	439	370	300	291	290	278	291	777	1480	872	451	324
5	424	410	315	297	299	282	289	878	1320	867	438	327
6	404	387	305	294	293	282	295	935	1240	989	423	356
7	390	310	305	270	280	281	300	917	1160	895	416	379
8	397	295	318	259	253	283	308	1030	1150	815	414	374
9	407	346	325	292	255	285	292	1240	1180	802	404	363
10	408	313	316	304	284	285	285	1250	1220	896	405	350
11	421	279	294	304	291	289	276	1270	1220	819	395	339
12	458	289	253	305	293	283	284	1500	1560	828	398	335
13	456	266	279	307	295	274	275	2080	1640	739	392	340
14	446	265	316	302	280	281	283	2800	1520	705	401	368
15	434	320	324	301	281	268	264	3480	1640	719	395	350
16	428	321	285	290	286	262	278	2810	1720	799	395	339
17	425	302	280	255	301	269	296	2290	1840	716	384	338
18	432	297	283	287	295	277	367	2030	1950	692	371	330
19	438	274	286	299	291	287	457	1890	1740	658	363	328
20	428	286	279	300	287	304	440	1860	1630	616	360	327
21	446	295	267	291	291	314	387	1540	1570	593	359	323
22	442	301	292	295	288	311	364	1470	1560	576	358	318
23	418	291	302	293	285	322	351	1660	1550	563	353	317
24	420	301	303	284	285	332	356	1870	1500	558	347	314
25	429	301	304	298	276	337	448	2010	1420	535	344	312
26	419	315	295	301	277	344	588	2190	1310	529	340	310
27	415	317	296	280	274	320	771	2110	1240	512	336	307
28	412	306	298	265	255	313	1030	2000	1200	493	338	307
29	409	287	284	276	---	312	1380	1940	1130	479	339	307
30	422	319	307	279	---	310	1170	1800	1070	474	338	310
31	428	---	309	290	---	291	---	1590	---	486	338	---
TOTAL	13444	9475	9231	8991	7949	9075	13019	52177	43690	22114	11968	9984
MEAN	434	316	298	290	284	293	434	1683	1456	713	386	333
MAX	557	410	325	308	301	344	1380	3480	1950	1010	479	379
MIN	390	265	253	255	253	260	264	777	1070	474	336	307
AC-FT	26670	18790	18310	17830	15770	18000	25820	103500	86660	43860	23740	19800

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 2001, BY WATER YEAR (WY)\*

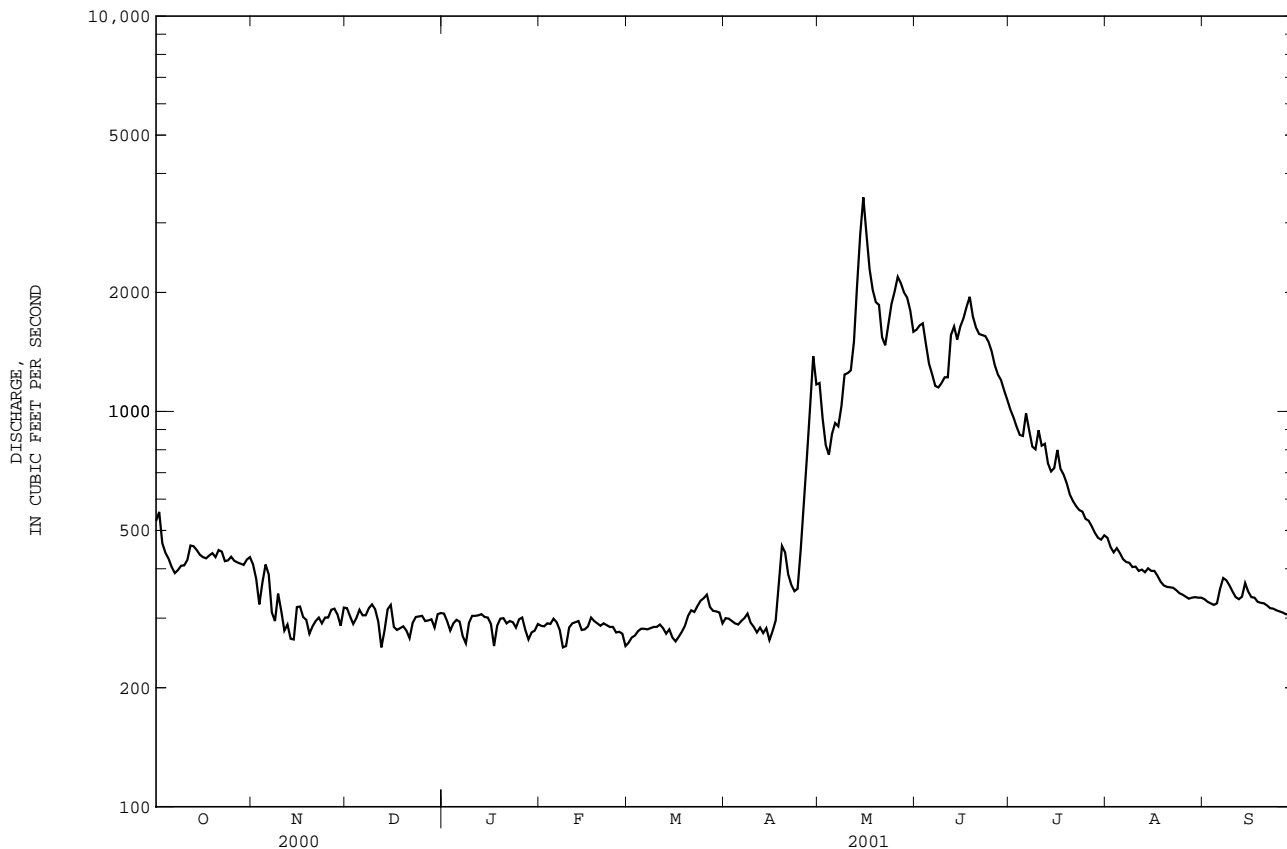
MEAN	458	384	323	309	306	313	504	1813	2948	1300	613	494
MAX	743	589	549	468	430	465	899	3135	5110	3669	1162	788
(WY)	1893	1960	1893	1893	1893	1960	1990	1976	1997	1975	1993	1968
MIN	238	247	214	200	220	206	263	873	643	345	269	233
(WY)	1932	1937	1935	1931	1935	1935	1937	1953	1934	1934	1934	1931

## GALLATIN RIVER BASIN

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1889 - 2001*	
ANNUAL TOTAL	261845		211117		--	
ANNUAL MEAN	715		578		816	
HIGHEST ANNUAL MEAN	--		--		1184	1976
LOWEST ANNUAL MEAN	--		--		408	1934
HIGHEST DAILY MEAN	3690	May 28	3480	May 15	8970	Jun 17 1974
LOWEST DAILY MEAN	253	Dec 12	253	Dec 12	174	Nov 21 1931
ANNUAL SEVEN-DAY MINIMUM	282	Dec 16	269	Feb 25	182	Jan 18 1931
MAXIMUM PEAK FLOW	--		3740	May 15	9270 <sup>a</sup>	Jun 27 1971
MAXIMUM PEAK STAGE	--		4.26	May 15	7.38	Jun 17 1974
ANNUAL RUNOFF (AC-FT)	519400		418800		591400	
10 PERCENT EXCEEDS	1730		1470		2040	
50 PERCENT EXCEEDS	414		338		430	
90 PERCENT EXCEEDS	302		280		270	

\* For period of operation.

a From rating curve extended above 5,500 ft<sup>3</sup>/s; gage height, 6.49 ft.

06043500 GALLATIN RIVER NEAR GALLATIN GATEWAY, MT--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 2001.

PERIOD OF DAILY RECORD.--

TEMPERATURE: (Seasonal records) May to September 2001.

INSTRUMENTATION.--Temperature probe installed May 3, 2001.

REMARKS.--Unpublished records of instantaneous specific conductance and temperature data are available in files of the Montana District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: During period of seasonal operation, maximum, 18.5°C, July 26, and August 4-6, 8, 2001; minimum, 3.0°C, April 13, 2001.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: During period of operation, maximum, 18.5°C, July 26 and August 4-6, 8; minimum, 3.0°C, April 13.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	10.0	4.0	7.0
5	---	---	---	---	---	---	---	---	---	9.0	5.5	7.5
6	---	---	---	---	---	---	---	---	---	8.5	3.5	6.5
7	---	---	---	---	---	---	---	---	---	9.5	3.5	7.0
8	---	---	---	---	---	---	---	---	---	9.5	6.0	8.0
9	---	---	---	---	---	---	---	---	---	8.5	6.0	7.5
10	---	---	---	---	---	---	---	---	---	8.5	5.0	6.5
11	---	---	---	---	---	---	---	---	---	10.0	4.5	7.5
12	---	---	---	---	---	---	---	---	---	11.0	5.5	8.5
13	---	---	---	---	---	---	---	---	---	11.0	6.0	8.5
14	---	---	---	---	---	---	---	---	---	9.5	5.5	7.5
15	---	---	---	---	---	---	---	---	---	8.0	5.0	6.5
16	---	---	---	---	---	---	---	---	---	8.0	5.0	6.0
17	---	---	---	---	---	---	---	---	---	9.0	4.0	6.5
18	---	---	---	---	---	---	---	---	---	8.5	6.5	7.5
19	---	---	---	---	---	---	---	---	---	9.0	5.0	7.0
20	---	---	---	---	---	---	---	---	---	8.5	5.0	6.5
21	---	---	---	---	---	---	---	---	---	9.0	3.0	6.0
22	---	---	---	---	---	---	---	---	---	11.5	5.5	8.5
23	---	---	---	---	---	---	---	---	---	12.0	7.0	9.5
24	---	---	---	---	---	---	---	---	---	12.0	7.0	9.5
25	---	---	---	---	---	---	---	---	---	10.5	7.5	9.0
26	---	---	---	---	---	---	---	---	---	11.0	7.5	9.5
27	---	---	---	---	---	---	---	---	---	9.5	7.0	8.5
28	---	---	---	---	---	---	---	---	---	9.5	7.0	8.5
29	---	---	---	---	---	---	---	---	---	11.0	7.0	9.0
30	---	---	---	---	---	---	---	---	---	10.0	6.0	8.0
31	---	---	---	---	---	---	---	---	---	12.0	6.5	9.5
MONTH	---	---	---	---	---	---	---	---	---	12.0	3.0	7.0



06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°34'03", long 110°22'48", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 450 ft downstream from Fishing Bridge, 0.3mi downstream from outlet of Yellowstone Lake, and at river mile 616.4.

DRAINAGE AREA.--1,006 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1922 to September 1982, October 1983 to September 1986, October 1988 to current year. Prior to October 1926, gage heights only. Monthly discharge only for winter periods in water years 1927-30, 1932-33, 1935-38, 1940, 1942-46 published in WSP 1309; figures of daily discharge for these months published in WSP 646, 666, 686, 701, 731, 746, 786, 806, 826, 856, 896, 956, 976, 1006, 1036, and 1056, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1309: See PERIOD OF RECORD. WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,729.58 ft above sea level. Prior to Oct. 2, 1928, nonrecording gage at site 450 ft upstream at datum 1.07 ft higher.

REMARKS.--Records good. No artificial regulation. U. S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	621	501	e320	e250	e250	e280	406	534	2300	2400	1370	743
2	621	497	e320	e250	e250	e280	409	558	2350	2340	1350	725
3	614	489	e310	e250	e250	e280	409	573	2400	2310	1320	711
4	601	483	e310	e250	e250	e290	409	592	2450	2270	1300	689
5	590	474	e300	e250	e250	e290	411	614	2450	2250	1280	679
6	582	469	e300	e250	e250	e290	418	643	2450	2220	1250	681
7	573	463	e300	e250	e250	e300	417	666	2430	2190	1230	652
8	568	461	e290	e250	e250	e300	425	696	2410	2150	1210	638
9	560	451	e290	e250	e250	e300	427	736	2410	2130	1180	642
10	553	442	e280	e250	e250	e310	423	776	2420	2130	1170	623
11	561	e430	e280	e250	e250	e310	423	811	2430	2120	1140	611
12	575	e420	e270	e250	e250	e320	424	860	2440	2110	1120	595
13	574	e410	e270	e250	e250	e320	427	924	2510	2080	1100	595
14	568	e410	e260	e250	e250	e330	427	976	2530	2070	1090	604
15	563	e400	e260	e250	e250	e330	427	882	2510	2020	1070	600
16	557	e400	e260	e250	e260	e330	427	1330	2510	1990	1060	591
17	550	e390	e260	e250	e260	e340	427	1440	2510	1960	1040	587
18	550	e390	e250	e250	e260	e340	421	1520	2500	1930	1020	589
19	545	e380	e250	e250	e270	e350	422	1590	2500	1890	991	578
20	542	e380	e250	e250	e270	e350	426	1630	2490	1830	964	570
21	535	e370	e250	e250	e270	e360	443	1680	2490	1790	941	559
22	523	e370	e250	e250	e280	e370	444	1710	2480	1760	912	549
23	518	e360	e250	e250	e280	e380	446	1730	2480	1710	892	543
24	523	e360	e250	e250	e280	e390	443	1780	2480	1670	875	540
25	526	e350	e250	e250	e280	397	443	1840	2500	1640	857	532
26	521	e350	e250	e250	e280	403	443	1920	2490	1600	828	527
27	517	e340	e250	e250	e280	406	447	2000	2480	1560	809	519
28	512	e340	e250	e250	e280	403	453	2090	2450	1530	796	515
29	508	e330	e250	e250	---	403	476	2180	2440	1500	784	505
30	507	e330	e250	e250	---	406	500	2220	2410	1440	767	503
31	508	---	e250	e250	---	403	---	2260	---	1420	750	---
TOTAL	17166	12240	8380	7750	7300	10561	12943	39761	73700	60010	32466	17995
MEAN	554	408	270	250	261	341	431	1283	2457	1936	1047	600
MAX	621	501	320	250	280	406	500	2260	2530	2400	1370	743
MIN	507	330	250	250	250	280	406	534	2300	1420	750	503
AC-FT	34050	24280	16620	15370	14480	20950	25670	78870	146200	119000	64400	35690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2001, BY WATER YEAR (WY)\*

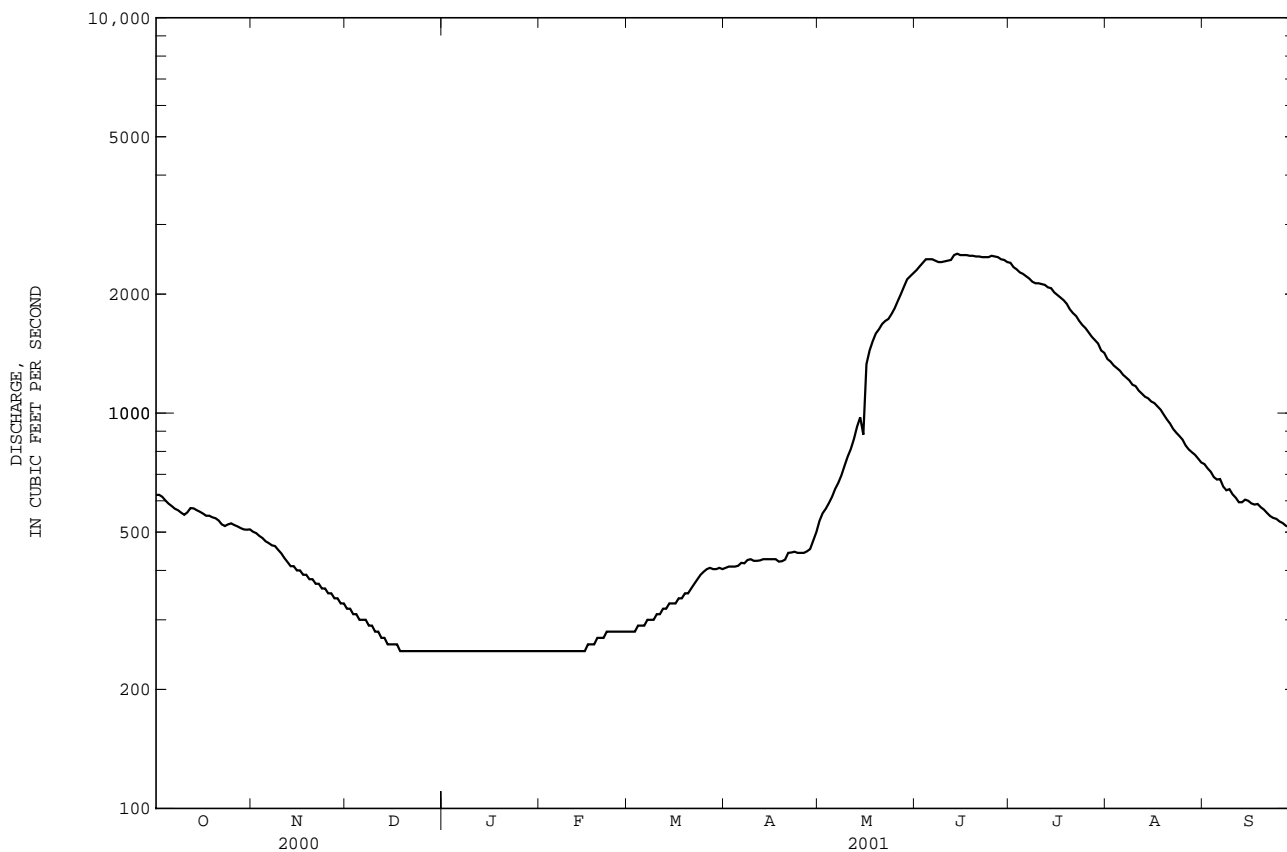
	806	609	477	400	389	447	544	1164	3695	4055	2222	1215
MEAN	806	609	477	400	389	447	544	1164	3695	4055	2222	1215
MAX	1259	984	775	699	637	717	801	2214	8574	7160	4031	1954
(WY)	1973	1951	1951	1998	1998	1962	1952	1997	1997	1982	1982	1982
MIN	327	276	246	168	122	130	175	605	1707	1272	812	538
(WY)	1989	1989	1932	1989	1989	1935	1937	1953	1934	1934	1934	1934

## YELLOWSTONE RIVER BASIN

06186500 YELLOWSTONE RIVER AT YELLOWSTONE LAKE OUTLET, YELLOWSTONE NATIONAL PARK--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1927 - 2001*	
ANNUAL TOTAL	419879		300272		--	
ANNUAL MEAN	1147		823		1340	
HIGHEST ANNUAL MEAN	--		--		2253	1997
LOWEST ANNUAL MEAN	--		--		682	1934
HIGHEST DAILY MEAN	4250	Jun 13	2530	Jun 14	9930	Jun 19 1997
LOWEST DAILY MEAN	250	Dec 18	250	Dec 18	100	Feb 18 1993
ANNUAL SEVEN-DAY MINIMUM	250	Dec 18	250	Dec 18	113	Feb 11 1989
MAXIMUM PEAK FLOW	--		2610	Jun 17	9950	Jun 18 1997
MAXIMUM PEAK STAGE	--		4.96	Jun 17	8.90	Jun 18 1997
ANNUAL RUNOFF (AC-FT)	832800		595600		971100	
10 PERCENT EXCEEDS	3250		2230		3490	
50 PERCENT EXCEEDS	530		505		680	
90 PERCENT EXCEEDS	350		250		339	

\* During periods of operation (October 1926 to September 1982, October 1983 to September 1986, October 1988 to current year).  
e Estimated.





## YELLOWSTONE RIVER BASIN

06187950 SODA BUTTE CREEK NEAR LAMAR RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°52'06", long 110°09'53", Yellowstone National Park, Hydrologic Unit 10070001, on left bank, 4 mi southeast of Lamar Ranger Station, and at river mile 1.5.

DRAINAGE AREA.--99.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,630 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several observations of water temperature and specific conductance were made during the year. U. S. Geological Survey satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	40	e27	e27	21	e20	26	125	489	211	69	40
2	82	38	e27	e26	21	e20	27	90	497	199	64	39
3	61	32	e27	27	22	e20	25	82	454	187	63	38
4	55	34	e27	28	22	e19	26	89	370	177	62	38
5	50	37	e27	e27	23	19	26	119	313	165	61	38
6	45	34	e27	e27	23	e19	27	125	292	164	57	42
7	44	30	27	e26	e21	e18	28	120	269	152	56	43
8	45	e31	28	e25	e19	e17	28	162	278	145	55	42
9	45	e32	29	e26	e21	18	25	206	317	139	54	40
10	45	e30	e28	26	e22	20	26	197	343	170	53	38
11	48	e31	e25	e26	e22	18	25	212	332	157	54	37
12	49	e32	e26	26	e22	17	26	306	373	146	53	36
13	49	e31	26	27	e21	17	25	441	332	130	53	37
14	49	e30	26	27	e20	17	26	563	307	e160	52	36
15	48	29	e26	e26	e21	16	e26	693	336	e180	51	36
16	47	e29	e25	e25	22	e15	28	606	364	e150	57	35
17	48	29	26	e24	22	e16	31	518	380	e120	55	35
18	48	28	e26	e25	e22	18	38	477	392	91	50	35
19	46	e28	e26	25	23	17	42	464	348	95	48	36
20	44	e28	e25	e24	23	19	37	465	333	95	46	35
21	44	e28	e25	e24	23	19	35	358	334	93	46	34
22	43	28	e27	e24	22	19	35	352	359	91	46	34
23	42	e27	27	e24	e22	20	34	420	362	88	44	33
24	42	e26	28	e24	22	22	35	507	352	86	43	33
25	45	e26	e27	e25	23	23	48	558	325	83	42	33
26	43	26	e27	e23	e22	24	88	632	291	80	41	33
27	42	28	28	e21	e20	24	126	594	275	77	41	32
28	42	e27	e28	e20	e19	26	148	609	260	75	42	32
29	41	e27	e28	e21	---	27	173	729	241	72	41	32
30	41	28	28	e21	---	26	134	554	225	69	41	31
31	41	---	28	e21	---	24	---	484	---	77	40	---
TOTAL	1503	904	832	768	606	614	1424	11857	10143	3924	1580	1083
MEAN	48.5	30.1	26.8	24.8	21.6	19.8	47.5	382	338	127	51.0	36.1
MAX	89	40	29	28	23	27	173	729	497	211	69	43
MIN	41	26	25	20	19	15	25	82	225	69	40	31
AC-FT	2980	1790	1650	1520	1200	1220	2820	23520	20120	7780	3130	2150

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

	MEAN	45.1	32.4	25.8	25.9	24.1	24.1	64.2	412	694	296	97.4	58.2
MAX	68.8	40.3	31.2	33.3	32.0	32.0	127	580	1251	447	162	92.0	
(WY)	1998	1997	1996	1997	2000	1997	1990	1993	1996	1998	1997	1997	
MIN	27.8	21.4	16.0	16.7	16.9	19.8	32.3	217	338	106	51.0	36.1	
(WY)	1989	1995	1989	1989	1995	2001	1993	1995	2001	1994	2001	2001	

## SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1989 - 2001

ANNUAL TOTAL	50841	35065	150	
ANNUAL MEAN	139	96.1	204	1996
HIGHEST ANNUAL MEAN			96.1	2001
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	908	Jun 6	729	May 29
LOWEST DAILY MEAN	20	Mar 12	15	Mar 16
ANNUAL SEVEN-DAY MINIMUM	22	Mar 10	17	Mar 11
MAXIMUM PEAK FLOW			968	May 29
MAXIMUM PEAK STAGE			6.50	May 29
INSTANTANEOUS LOW FLOW				b11
ANNUAL RUNOFF (AC-FT)	100800	69550	108800	Jan 31 1989
10 PERCENT EXCEEDS	461	332	489	
50 PERCENT EXCEEDS	44	35	43	
90 PERCENT EXCEEDS	26	21	22	

a--Gage height, 5.61 ft.

b--May have been less during period of ice effect.

e--Estimated.



## 06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°55'40", long 110°23'35", Yellowstone National Park, Hydrologic Unit 10070001, on left bank 0.5 mi north of the Cooke City highway, 1.6 mi northeast of Tower Falls Ranger Station, 2.7 mi downstream from Slough Creek, and at river mile 0.5.

DRAINAGE AREA.--660 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1922, April 1923 to September 1969, May 1985 to September 1986 (seasonal records only), October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,000 ft above sea level, from topographic map. Prior to Sept. 16, 1925, nonrecording gage and Sept. 16, 1925 to July 29, 1927, water-stage recorder at same site at datum 1.00 ft higher. July 29, 1927 to Sept. 30, 1969, water-stage recorder at same site and datum. May 1985 to September 1986, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	175	e120	e95	e85	e95	173	1820	2700	833	272	130
2	513	e160	e120	e90	e90	e100	169	1260	2740	779	242	128
3	267	e130	e120	e95	e90	e100	159	1080	2490	724	230	125
4	217	134	e115	e95	e90	e110	160	1140	2050	676	237	123
5	193	149	e115	e95	e95	e120	157	1600	1730	641	233	124
6	174	140	e115	e90	e90	e130	161	1770	1600	625	218	140
7	157	e130	e115	e85	e80	e120	173	1600	1460	595	204	173
8	151	e125	e120	e85	e70	e120	179	2110	1440	558	199	177
9	152	e120	e120	e90	e80	e120	159	2890	1570	579	196	162
10	152	e115	e105	e100	e85	e130	156	2660	1660	824	229	149
11	157	e110	e90	e95	e90	e140	145	2750	1620	746	200	140
12	173	e110	e100	e95	e90	e150	152	3640	1700	654	197	136
13	180	e110	e100	e95	e85	e160	151	5000	1660	554	189	138
14	181	e110	e110	e95	e80	e140	150	5780	1560	521	197	139
15	182	e115	e105	e90	e85	e130	135	6850	1790	705	190	144
16	185	e115	e95	e85	e95	e120	149	6310	2190	668	193	140
17	188	e115	e105	e75	e100	e150	177	4810	2370	542	199	138
18	205	e115	e100	e85	e105	e180	334	4280	2350	493	182	135
19	210	e115	e100	e85	e110	e220	534	3940	1970	458	168	134
20	199	e115	e95	e85	e105	e250	465	3990	1750	422	158	135
21	187	e120	e90	e85	e110	e230	369	2720	1640	391	157	131
22	185	e125	e100	e85	e105	e210	335	2650	1620	369	157	127
23	173	e125	e105	e85	e100	e200	341	3270	1580	350	153	125
24	169	e125	e105	e85	e105	e200	336	3810	1490	334	149	123
25	195	e125	e100	e90	e105	e200	505	4010	1400	315	145	123
26	209	e130	e100	e85	e100	e190	999	4110	1230	303	140	121
27	207	e130	e100	e80	e95	e190	1540	3820	1150	290	137	120
28	197	e120	e95	e75	e90	198	1940	3800	1060	276	137	120
29	190	e120	e90	e80	---	201	2420	4010	980	261	135	120
30	188	e125	e100	e85	---	187	1870	3240	899	253	133	121
31	183	---	e100	e85	---	162	---	2770	---	263	131	---
TOTAL	6138	3753	3250	2725	2610	4953	14693	103490	51449	16002	5707	4041
MEAN	198	125	105	87.9	93.2	160	490	3338	1715	516	184	135
MAX	513	175	120	100	110	250	2420	6850	2740	833	272	177
MIN	151	110	90	75	70	95	135	1080	899	253	131	120
AC-FT	12170	7440	6450	5410	5180	9820	29140	205300	102000	31740	11320	8020

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2001, BY WATER YEAR (WY)\*

	MEAN	214	157	120	107	102	114	466	2847	4256	1362	353	230
MAX	485	330	202	200	171	204	1684	6885	9044	3256	886	518	
(WY)	1942	1928	1951	1969	1969	1999	1990	1928	1996	1943	1968	1968	
MIN	109	88.1	75.5	71.8	70.0	67.9	106	969	1408	344	173	115	
(WY)	1989	1937	1953	1989	1942	1964	1945	1933	1934	1931	1940	1988	

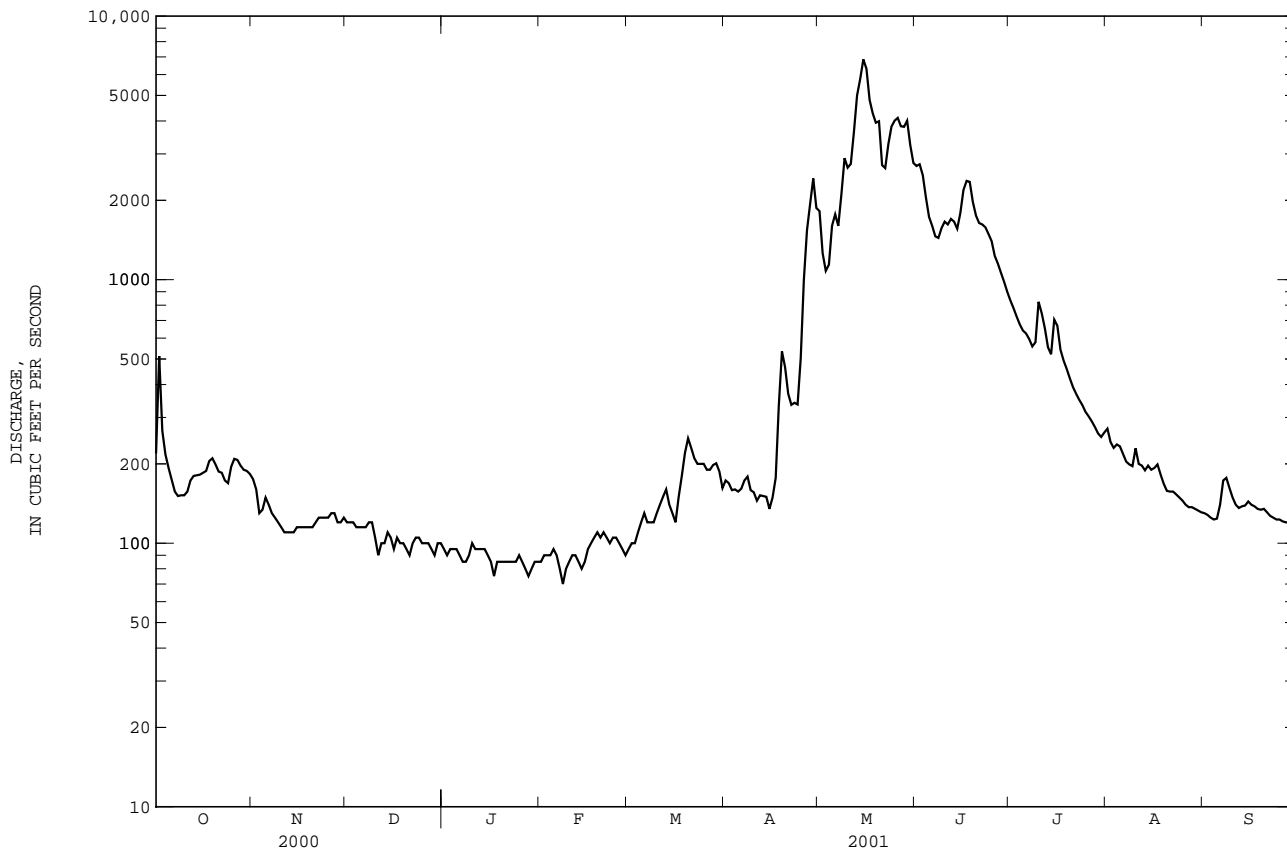
## YELLOWSTONE RIVER BASIN

06188000 LAMAR RIVER NEAR TOWER FALLS RANGER STATION, YELLOWSTONE NATIONAL PARK--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1923 - 2001*	
ANNUAL TOTAL	335520		218811		--	
ANNUAL MEAN	917		599		867	
HIGHEST ANNUAL MEAN	--		--		1531	1997
LOWEST ANNUAL MEAN	--		--		525	1934
HIGHEST DAILY MEAN	8210	May 29	6850	May 15	15600	Jun 10 1996
LOWEST DAILY MEAN	80	Jan 29	70	Feb 8	45	Mar 23 1964
ANNUAL SEVEN-DAY MINIMUM	87	Jan 25	82	Jan 26	57	Mar 5 1964
MAXIMUM PEAK FLOW	--		7690	May 15	19500	Jun 10 1996
MAXIMUM PEAK STAGE	--		7.39	May 15	12.15	Jun 10 1996
ANNUAL RUNOFF (AC-FT)	665500		434000		628300	
10 PERCENT EXCEEDS	3330		1800		2980	
50 PERCENT EXCEEDS	173		157		189	
90 PERCENT EXCEEDS	95		90		90	

\* For period of operation.

e Estimated.



## 06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK

LOCATION.--Lat 44°59'33", long 110°41'26", Yellowstone National Park, Hydrologic Unit 10070001, on left bank at Wyoming-Montana state line, 400 ft upstream from highway bridge, 0.5 mi downstream from Hot River (formerly Boiling River), 1.5 mi north of Mammoth, and at river mile 2.9.

DRAINAGE AREA.--202 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1938 to September 1972, April 1984 to current year. Prior to October 1959, published as Gardiner River near Mammoth.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,623.97 ft above sea level (levels by National Park Service).

REMARKS.--Records good. No regulation or diversion upstream of station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	126	110	103	94	103	104	287	328	156	112	95
2	145	118	104	95	94	101	106	224	317	152	109	93
3	134	113	111	106	95	102	101	202	319	148	109	92
4	129	120	107	101	97	101	104	204	304	146	113	92
5	127	121	107	101	98	101	102	236	279	146	111	93
6	124	117	105	100	98	101	102	256	261	145	108	100
7	123	106	107	87	91	100	103	248	242	146	108	99
8	124	112	106	86	80	100	103	280	232	149	107	99
9	124	118	107	107	93	100	98	343	228	155	107	97
10	125	103	104	112	99	102	99	336	224	168	107	95
11	134	107	91	102	100	100	97	345	220	154	105	94
12	139	114	100	103	101	100	99	378	251	149	106	93
13	138	99	100	101	99	100	98	457	256	139	106	95
14	134	99	106	100	91	99	99	537	260	138	111	95
15	133	103	103	95	99	98	95	733	261	137	110	96
16	132	104	94	95	98	96	97	804	237	147	108	95
17	132	107	106	77	96	96	104	647	224	136	105	95
18	133	107	107	107	97	98	125	543	227	133	102	94
19	132	107	104	101	97	99	142	493	213	128	100	94
20	129	106	101	99	98	103	138	478	204	124	99	94
21	132	108	94	95	100	105	124	407	199	121	100	93
22	129	111	104	99	103	105	117	377	195	119	100	92
23	124	112	105	92	103	106	116	383	192	118	99	92
24	126	111	105	92	103	107	124	400	186	117	99	91
25	126	112	104	98	102	110	155	411	182	116	98	90
26	126	111	103	97	102	111	196	465	177	115	97	90
27	124	111	103	87	101	107	231	433	175	114	97	90
28	126	106	103	86	93	106	257	437	170	113	95	90
29	124	107	90	90	---	106	296	461	165	111	94	91
30	127	114	108	96	---	106	269	390	161	110	95	91
31	131	---	103	94	---	101	---	346	---	111	95	---
TOTAL	4034	3310	3202	3004	2722	3170	4001	12541	6889	4161	3212	2810
MEAN	130	110	103	96.9	97.2	102	133	405	230	134	104	93.7
MAX	148	126	111	112	103	111	296	804	328	168	113	100
MIN	123	99	90	77	80	96	95	202	161	110	94	90
AC-FT	8000	6570	6350	5960	5400	6290	7940	24880	13660	8250	6370	5570

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)\*

	MEAN	128	113	103	97.6	93.5	94.1	141	512	717	305	163	137
MAX	175	151	135	134	128	128	304	1067	1354	662	236	190	
(WY)	1969	1998	1998	1998	1998	1998	1990	1997	1971	1943	1943	1968	
MIN	95.9	85.5	79.3	77.6	75.0	75.4	84.1	283	212	133	103	93.4	
(WY)	1961	1940	1941	1941	1940	1942	1945	1960	1987	1988	1988	1988	

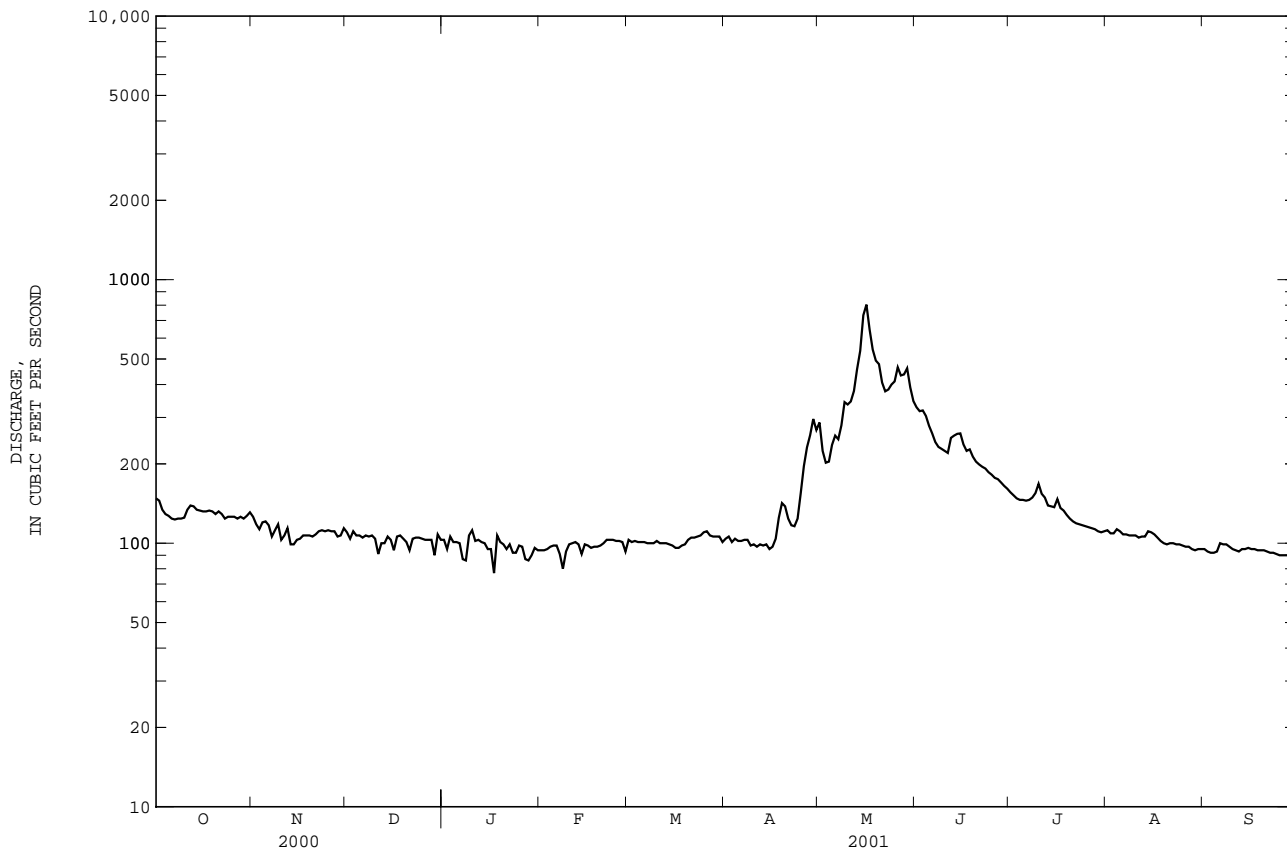
## YELLOWSTONE RIVER BASIN

06191000 GARDNER RIVER NEAR MAMMOTH, YELLOWSTONE NATIONAL PARK--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1939 - 2001*	
ANNUAL TOTAL	70021		53056		--	
ANNUAL MEAN	191		145		217	
HIGHEST ANNUAL MEAN	--		--		324	1997
LOWEST ANNUAL MEAN	--		--		138	1988
HIGHEST DAILY MEAN	828	May 29	804	May 16	1830	May 29 1956
LOWEST DAILY MEAN	90	Dec 29	77	Jan 17	53	Dec 15 1988
ANNUAL SEVEN-DAY MINIMUM	100	Dec 10	90	Sep 24	61	Feb 1 1989
MAXIMUM PEAK FLOW	--		838	May 16	2080 <sup>a</sup>	Jun 4 1956
MAXIMUM PEAK STAGE	--		3.61	May 16	5.03	Jun 2 1997
ANNUAL RUNOFF (AC-FT)	138900		105200		157500	
10 PERCENT EXCEEDS	422		256		520	
50 PERCENT EXCEEDS	122		107		122	
90 PERCENT EXCEEDS	106		94		88	

\* For period of operation.

a Gage height, 4.46 ft.



MEAN	1528	1193	967	853	840	922	1548	6092	11480	6824	3194	1955
MAX	2429	2058	1424	1361	1340	1376	3542	13590	22540	13260	5688	3207
(WY)	1973	1928	1984	1997	1997	1997	1990	1928	1997	1982	1982	1968
MIN	781	702	551	448	411	412	576	2575	4245	2025	1319	938
(WY)	1989	1989	1937	1937	1937	1937	1937	1975	1934	1919	1919	1938

## YELLOWSTONE RIVER BASIN

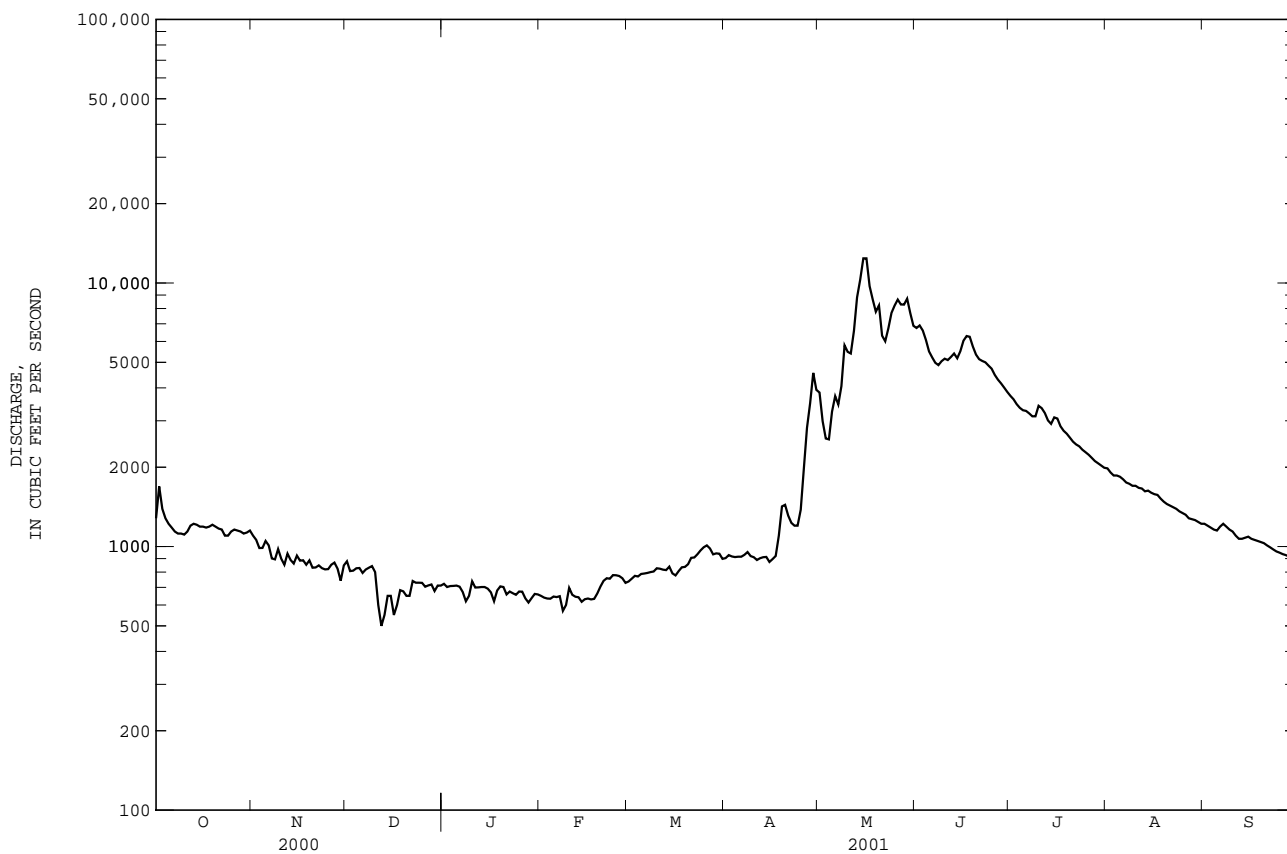
06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT--Continued  
(National Water-Quality Assessment Program)

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1889 - 2001*	
ANNUAL TOTAL	1039604		733393		--	
ANNUAL MEAN	2840		2009		3125	
HIGHEST ANNUAL MEAN	--		--		5158	1997
LOWEST ANNUAL MEAN	--		--		1903	1934
HIGHEST DAILY MEAN	15700	May 29	12400	May 15	32000	Jun 14 1918
LOWEST DAILY MEAN	500	Dec 12	500	Dec 12	380	Feb 5 1989
ANNUAL SEVEN-DAY MINIMUM	586	Dec 11	586	Dec 11	393	Feb 4 1937
MAXIMUM PEAK FLOW	--		13100	May 16	32200 <sup>a</sup>	Jun 10 1996
MAXIMUM PEAK STAGE	--		6.92	May 16	11.50	Jun 14 1918
ANNUAL RUNOFF (AC-FT)	2062000		1455000		2264000	
10 PERCENT EXCEEDS	8450		5230		8490	
50 PERCENT EXCEEDS	1190		1070		1400	
90 PERCENT EXCEEDS	832		663		760	

\* For period of operation.

a Gage height, 10.92 ft.

e Estimated.





06205450 CLARKS FORK YELLOWSTONE RIVER NEAR MONTANA-WYOMING STATE LINE, NEAR COOKE CITY, MT

LOCATION.--Lat 44°57'28", long 109°48'21", Park County, WY, Hydrologic Unit 10070006, Shoshone National Forest, at bridge on U.S. Highway 212, 300 ft upstream from Pilot Creek, 0.9 mi downstream from Rock Creek, 1.8 mi northwest of Crazy Creek Campground, and 7.5 mi southeast of Cooke City, MT.

PERIOD OF RECORD.--August 1975 to October 1977, November 1990 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
DEC 20...	0930	12	590	11.4	101	8.7	110	-12.0	.00	62	20.1	2.76	.38	
MAR 01...	0845	7.0	588	8.4	75	7.9	126	.00	.00	65	21.0	3.03	.44	
MAY 16...	1330	976	587	10.7	102	7.6	38	12.0	2.5	18	5.58	1.05	.35	
JUL 31...	0825	45	--	--	--	7.7	80	9.5	12.0	39	12.2	2.09	.34	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
DEC 20...	.1	1.6	55	.4	<.2	5.4	5.2	.09	2.25	69	<.041	.106	E.004	
MAR 01...	.1	1.6	63	.4	<.2	5.8	5.7	.10	1.44	76	<.041	.108	<.006	
MAY 16...	.1	.8	18	.4	<.2	4.0	2.6	.04	68.0	26	<.040	.064	<.006	
JUL 31...	.1	1.4	37	.2	<.2	3.8	4.8	.06	5.75	47	<.040	E.037	<.006	
DATE		PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
DEC 20...	<.018	4	.08	.2	18.7	<.06	<13	<.04	<.8	.03	.6	<10	<.08	
MAR 01...	<.018	4	<.05	E.1	18.9	<.06	<13	.05	<.8	.04	.5	M	E.05	
MAY 16...	<.020	29	E.03	.2	8.2	<.06	<13	.49	<.8	.04	3.5	30	.11	
JUL 31...	<.020	9	<.05	.2	16.4	<.06	E6	<.04	<.8	.02	1.1	M	<.08	
DATE		LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)		
DEC 20...	<3.9	1.0	<.23	.2	.10	<.3	<1.0	49.9	<8.0	2	.13			
MAR 01...	<3.9	1.1	<.23	E.2	<.06	<.3	<1.0	53.0	<8.0	5	.14			
MAY 16...	<4.0	3.0	<.01	E.1	.43	E.2	<1.0	22.0	<8.0	7	.07			
JUL 31...	<4.0	1.3	<.01	E.2	<.06	<.3	<1.0	42.4	<8.0	2	.09			

E -- Estimated value.

M -- Presence verified, not quantified.

## YELLOWSTONE RIVER BASIN

06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT

LOCATION.--Lat 45°00'37", long 109°03'53", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.32, T.9 S., R.22 E., Carbon County, Hydrologic Unit 10070006, on left bank 0.2 mi upstream from county road bridge and Big Sand Coulee, 0.8 mi north of Wyoming-Montana State line, 9.5 mi southwest of Belfry, and at river mile 71.2.

DRAINAGE AREA.--1,154 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1921 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Clarks Fork at Chance prior to October 1956 and as Clarks Fork Yellowstone River at Chance October 1956 to September 1968.

REVISED RECORDS.--WSP 1309: 1922 (M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,986.24 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Nov. 15, 1934, nonrecording gage, and Nov. 15, 1934, to July 26, 1951, water-stage recorder at bridge 0.4 mi downstream of different datum. July 27, 1951 to Sept. 30, 1953, water-stage recorder at present site at datum 0.98 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,100 acres upstream from station. U. S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	207	259	218	184	176	194	903	2720	1630	147	54
2	585	200	252	217	192	196	206	766	2970	1510	142	54
3	332	183	253	210	197	195	201	591	2910	1420	133	55
4	271	162	254	219	194	194	193	495	2400	1330	127	56
5	247	188	254	218	207	194	195	538	1840	1190	133	58
6	230	218	249	213	195	198	189	675	1470	1080	127	63
7	209	197	254	194	177	195	185	624	1310	1040	123	69
8	193	175	252	157	217	192	197	675	1280	1000	117	70
9	189	208	244	173	207	192	197	1040	1540	966	114	65
10	186	276	e250	206	e200	195	177	1200	1910	1150	112	62
11	189	262	271	209	236	196	170	1260	2200	1290	116	58
12	196	233	264	195	212	197	156	1500	2260	1180	104	57
13	187	253	279	204	193	196	134	2250	2990	988	104	57
14	186	258	283	194	195	194	134	3380	2550	837	100	60
15	190	270	271	183	173	187	141	4390	2000	942	97	62
16	193	292	244	173	197	173	129	4630	1870	984	96	61
17	198	260	221	149	191	168	146	3500	1900	918	96	57
18	219	269	224	172	172	177	165	2910	2150	827	90	56
19	226	279	220	194	185	175	293	2470	2130	709	82	55
20	224	276	218	202	182	181	296	2680	1880	609	80	55
21	213	278	210	195	178	188	265	2140	1790	499	73	56
22	210	281	207	195	185	196	221	1810	1840	426	68	55
23	205	274	219	198	189	207	219	1980	2060	374	66	55
24	196	263	225	188	189	216	217	2680	2290	331	59	55
25	215	263	237	181	189	232	133	3310	2520	278	59	57
26	222	264	233	194	186	249	278	3890	2460	240	58	57
27	226	266	231	183	188	246	534	4160	2180	223	57	58
28	219	263	238	164	178	226	766	3800	2010	202	57	57
29	211	250	228	163	---	215	943	3780	1940	187	57	57
30	216	253	216	185	---	214	890	3590	1810	165	53	56
31	210	---	227	178	---	213	---	2930	---	154	53	---
TOTAL	6898	7321	7487	5924	5388	6173	8164	70547	63180	24679	2900	1747
MEAN	223	244	242	191	192	199	272	2276	2106	796	93.5	60.4
MAX	585	292	283	219	236	249	943	4630	2990	1630	147	70
MIN	105	162	207	149	172	168	129	495	1280	154	53	54
AC-FT	13680	14520	14850	11750	10690	12240	16190	139900	125300	48950	5750	3470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2001, BY WATER YEAR (WY)

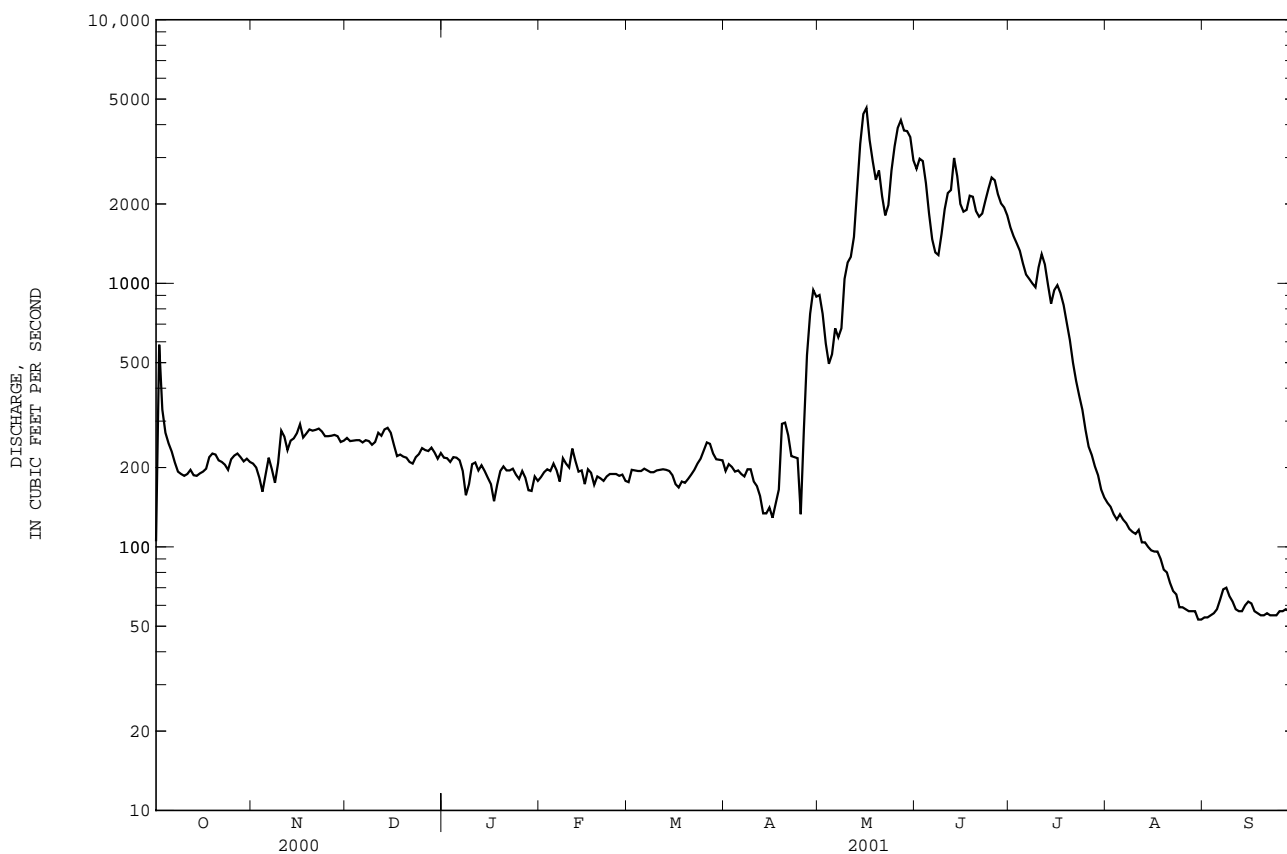
	MEAN	283	296	264	232	223	222	426	2041	4092	2199	619	317
MAX	725	648	379	359	329	364	1167	5704	7225	5744	1453	834	
(WY)	1931	1928	1951	1997	1963	1972	1943	1928	1997	1975	1951	1941	
MIN	45.5	115	110	110	100	96.3	110	839	1607	349	66.5	50.1	
(WY)	1989	1989	1922	1922	1922	1922	1961	1968	1987	1988	1988	1988	

## 06207500 CLARKS FORK YELLOWSTONE RIVER NEAR BELFRY, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1921 - 2001	
ANNUAL TOTAL	290780		210408		--	
ANNUAL MEAN	794		576		936	
HIGHEST ANNUAL MEAN	--		--		1485	1997
LOWEST ANNUAL MEAN	--		--		547	1977
HIGHEST DAILY MEAN	5970	May 29	4630	May 16	12300	Jun 9 1981
LOWEST DAILY MEAN	67	Sep 17	53 <sup>a</sup>	Aug 30	33	Apr 26 1961
ANNUAL SEVEN-DAY MINIMUM	75	Sep 16	55	Aug 29	37	Oct 8 1988
MAXIMUM PEAK FLOW	--		4960	May 16	14800	Jun 9 1981
MAXIMUM PEAK STAGE	--		5.71	May 16	9.97	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	576800		417300		678000	
10 PERCENT EXCEEDS	2560		1920		2870	
50 PERCENT EXCEEDS	264		210		300	
90 PERCENT EXCEEDS	149		66		170	

a Also occurred on Aug. 31.

e Estimated.



## YELLOWSTONE RIVER BASIN

06218500 WIND RIVER NEAR DUBOIS, WY

LOCATION.--Lat 43°34'43", long 109°45'33", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 25. T.42N., R.108 W., Fremont County, Hydrologic Unit 10080001, on left bank 2.5 mi upstream from Warm Springs Creek and 6.7 mi northwest of Dubois.

DRAINAGE AREA.--232 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to September 1992, May to September 2001.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,188.71 ft above National Geodetic Vertical Datum of 1929 (levels by Bureau of Reclamation).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 2,300 acres.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e185	261	90	44	44
2	---	---	---	---	---	---	---	e140	288	86	49	42
3	---	---	---	---	---	---	---	111	229	80	52	39
4	---	---	---	---	---	---	---	104	190	73	55	38
5	---	---	---	---	---	---	---	120	157	69	55	41
6	---	---	---	---	---	---	---	150	136	66	55	56
7	---	---	---	---	---	---	---	132	113	e74	51	62
8	---	---	---	---	---	---	---	166	121	e82	50	60
9	---	---	---	---	---	---	---	297	153	e78	55	57
10	---	---	---	---	---	---	---	329	186	e94	65	52
11	---	---	---	---	---	---	---	347	188	e88	64	47
12	---	---	---	---	---	---	---	402	170	e86	58	47
13	---	---	---	---	---	---	---	488	144	e84	56	48
14	---	---	---	---	---	---	---	628	126	e88	59	55
15	---	---	---	---	---	---	---	780	126	e90	62	58
16	---	---	---	---	---	---	---	1080	116	e90	64	55
17	---	---	---	---	---	---	---	660	88	e80	63	52
18	---	---	---	---	---	---	---	490	89	72	58	52
19	---	---	---	---	---	---	---	375	84	71	55	51
20	---	---	---	---	---	---	---	389	81	68	53	47
21	---	---	---	---	---	---	---	244	94	61	51	46
22	---	---	---	---	---	---	---	207	112	57	52	46
23	---	---	---	---	---	---	---	244	149	52	50	46
24	---	---	---	---	---	---	---	315	142	48	50	45
25	---	---	---	---	---	---	---	363	161	47	47	44
26	---	---	---	---	---	---	---	391	141	47	44	44
27	---	---	---	---	---	---	---	416	126	47	44	44
28	---	---	---	---	---	---	---	391	122	46	44	42
29	---	---	---	---	---	---	---	306	111	45	43	41
30	---	---	---	---	---	---	---	288	97	42	43	42
31	---	---	---	---	---	---	---	260	---	43	42	---
TOTAL	---	---	---	---	---	---	---	10798	4301	2144	1633	1443
MEAN	---	---	---	---	---	---	---	348	143	69.2	52.7	48.1
MAX	---	---	---	---	---	---	---	1080	288	94	65	62
MIN	---	---	---	---	---	---	---	104	81	42	42	38
AC-FT	---	---	---	---	---	---	---	21420	8530	4250	3240	2860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	MEAN	88.4	71.5	62.0	56.8	55.7	61.6	105	364	650	313	137	98.7
MAX	158	103	88.3	88.4	77.6	105	192	628	1181	796	290	171	
(WY)	1987	1951	1951	1965	1972	1972	1946	1951	1972	1975	1951	1986	
MIN	55.5	40.1	39.0	36.2	38.6	43.2	56.4	160	143	66.0	52.7	48.1	
(WY)	1989	1961	1988	1989	1961	1950	1961	1953	2001	1977	2001	2001	

06218500 WIND RIVER NEAR DUBOIS, WY--Continued

## SUMMARY STATISTICS

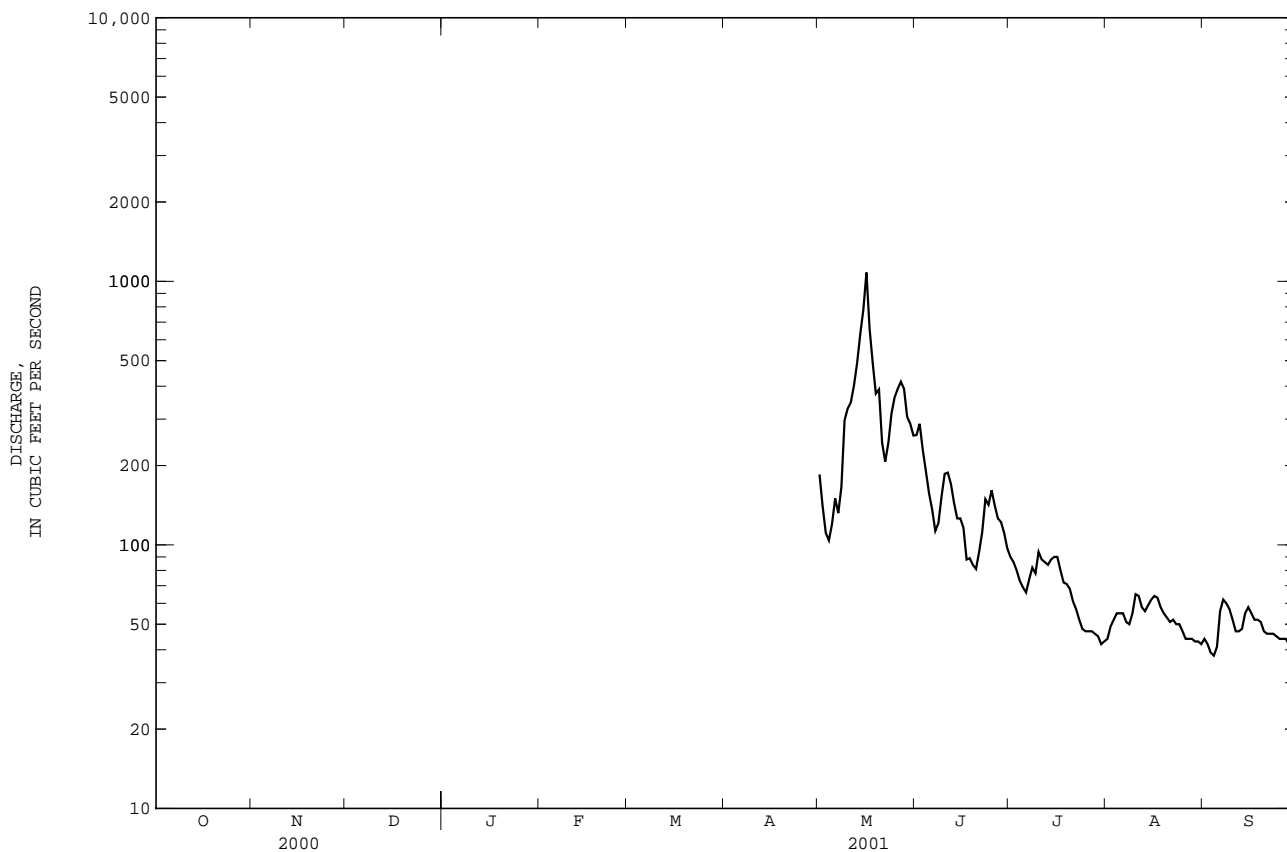
FOR 2001 WATER YEAR

WATER YEARS 1946 - 2001

ANNUAL MEAN	--		174	
HIGHEST ANNUAL MEAN	--		280	1951
LOWEST ANNUAL MEAN	--		90.0	1977
HIGHEST DAILY MEAN	1080	May 16	1870	Jun 8 1972
LOWEST DAILY MEAN	38	Sep 4	26	Feb 5 1982
ANNUAL SEVEN-DAY MINIMUM	--		28	Feb 3 1982
MAXIMUM PEAK FLOW	1550	May 16	1940 <sup>a</sup>	Jun 8 1972
MAXIMUM PEAK STAGE	5.14	May 16	5.66	Jun 2 1956
ANNUAL RUNOFF (AC-FT)	--		125900	

a Gage height, 5.48 ft.

e Estimated.



## YELLOWSTONE RIVER BASIN

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

LOCATION.--Lat 43°26'30", long 109°27'29", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.3, T.5 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, 400 ft downstream from East Fork Wind River and 12.1 mi southeast of Dubois.

DRAINAGE AREA.--1,073 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above sea level, from topographic map.

REMARKS.--Records good. Diversions for irrigation of about 15,000 acres upstream from station. Data collection platform with satellite telemetry at station.

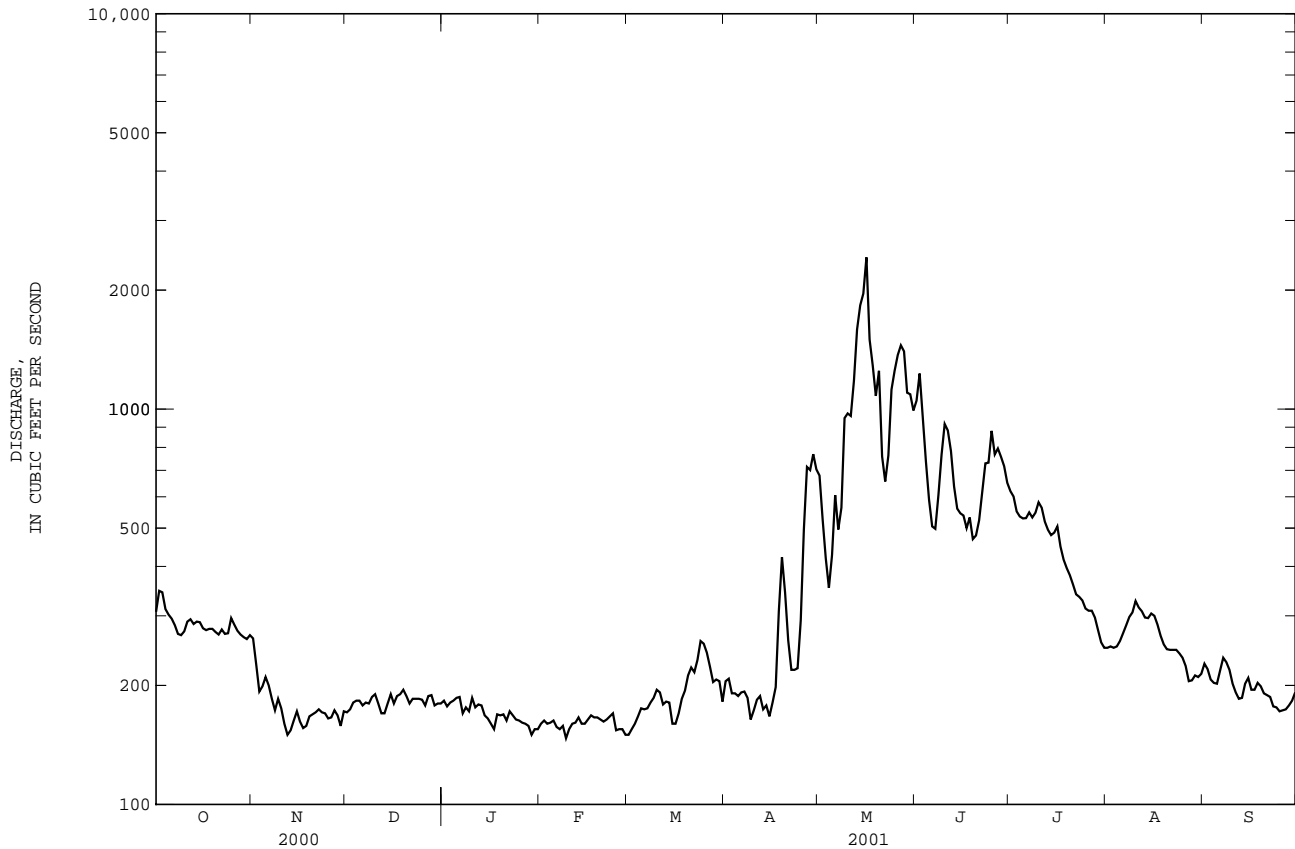
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	307	263	171	183	e160	e150	205	679	1050	620	249	227
2	347	226	174	177	163	e155	208	526	1230	601	251	220
3	344	193	181	181	160	e160	191	419	951	551	249	207
4	312	199	183	183	161	167	191	353	737	535	251	203
5	302	e210	183	186	163	175	188	427	590	529	259	202
6	295	e200	178	187	157	174	192	606	505	530	271	218
7	284	e185	181	170	e155	175	193	496	498	548	284	235
8	270	173	e180	176	158	181	186	563	606	532	298	229
9	268	e185	187	172	147	186	164	949	767	547	306	219
10	274	e175	e190	186	e155	195	173	975	917	581	327	202
11	290	e160	e180	176	e160	192	184	961	883	563	315	192
12	294	e150	e170	179	161	179	188	1180	783	519	308	185
13	286	e154	e170	178	166	182	174	1590	637	495	297	186
14	290	163	e180	168	e160	181	178	1830	560	480	296	202
15	289	172	e190	e165	e160	e160	167	1960	545	487	304	209
16	279	162	e180	e160	164	e160	181	2420	538	505	300	195
17	276	156	188	e155	168	e170	198	1500	500	449	285	195
18	278	158	e190	169	166	185	308	1290	532	416	267	203
19	278	167	e195	168	166	194	422	1080	469	396	254	199
20	273	169	188	169	164	212	343	1250	479	380	247	191
21	269	171	e180	163	162	222	260	759	523	360	246	189
22	277	174	e185	172	164	216	219	656	617	340	246	187
23	270	171	e185	168	167	232	219	763	729	335	246	177
24	271	170	e185	164	170	259	221	1120	732	328	241	176
25	296	165	184	163	154	255	292	1250	881	313	235	172
26	285	166	178	161	e155	242	496	1370	768	309	224	173
27	275	173	188	e160	e155	223	714	1450	795	309	205	174
28	269	168	189	158	e150	204	701	1400	757	297	206	178
29	265	158	178	e150	---	207	769	1100	717	276	212	183
30	262	172	180	e155	---	205	704	1090	651	257	210	192
31	268	---	180	e155	---	182	---	992	---	249	214	---
TOTAL	8843	5308	5651	5257	4491	5980	8829	33004	20947	13637	8103	5920
MEAN	285	177	182	170	160	193	294	1065	698	440	261	197
MAX	347	263	195	187	170	259	769	2420	1230	620	327	235
MIN	262	150	170	150	147	150	164	353	469	249	205	172
AC-FT	17540	10530	11210	10430	8910	11860	17510	65460	41550	27050	16070	11740
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)												
MEAN	316	241	196	186	182	206	324	1355	2558	1379	593	392
MAX	421	303	242	222	218	246	429	2121	4559	2473	1020	663
(WY)	1998	1999	1998	1998	1999	1999	1994	1997	1997	1995	1997	1997
MIN	244	171	146	122	144	178	213	621	698	386	261	197
(WY)	1993	1993	1993	1993	1993	1995	1995	1995	2001	1994	2001	2001

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1991 - 2001	
ANNUAL TOTAL	183930		125970		--	
ANNUAL MEAN	503		345		662	
HIGHEST ANNUAL MEAN	--		--		982	1997
LOWEST ANNUAL MEAN	--		--		345	2001
HIGHEST DAILY MEAN	3020	May 29	2420	May 16	8770	Jun 9 1997
LOWEST DAILY MEAN	150	Nov 12	147	Feb 9	90	Jan 13 1993
ANNUAL SEVEN-DAY MINIMUM	159	Nov 12	154	Feb 25	96	Jan 9 1993
MAXIMUM PEAK FLOW	--		3170	May 16	11300	Jun 9 1997
MAXIMUM PEAK STAGE	--		6.20	May 16	9.97	Jun 9 1997
ANNUAL RUNOFF (AC-FT)	364800		249900		479400	
10 PERCENT EXCEEDS	1180		730		1720	
50 PERCENT EXCEEDS	268		209		280	
90 PERCENT EXCEEDS	180		162		170	

e Estimated.



## YELLOWSTONE RIVER BASIN

06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1986-92, July to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]



06220800 WIND RIVER ABOVE RED CREEK, NEAR DUBOIS, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL-AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL-PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L) (38260)
JUN 05...	E.004	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.03
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.03
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)
JUN 05...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.013	<.004	<.010
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI-MENT, DIS-CHARGE, SUS-SUS- PENDEDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-SUS- PENDEDED (T/DAY) (80155)		
JUN 05...	<.011	<.023	<.011	E.015	<.034	<.017	<.005	<.002	<.009	17	28		
JUL 16...	--	--	--	--	--	--	--	--	--	38	52		
AUG 08...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	3	2.6		
SEP 25...	--	--	--	--	--	--	--	--	--	12	5.4		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY

LOCATION.--Lat 43°20'44", long 109°24'34", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.1, T.4 N., R.6 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.5 mi upstream from Upper Dinwoody Lake, 7.0 mi west of Burris, and 17 mi southeast of Dubois.

DRAINAGE AREA.--88.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to September 1978, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,500 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	20	6.8	5.3	3.0	3.1	6.3	92	247	394	e266	213
2	50	14	7.2	5.0	3.0	3.1	6.3	69	270	415	e268	228
3	46	13	7.0	5.0	3.0	3.2	6.0	42	283	433	324	241
4	40	15	7.3	5.1	3.0	3.1	6.2	42	237	435	396	211
5	39	20	7.3	5.2	3.1	3.2	6.7	49	178	445	425	222
6	33	16	7.1	5.3	3.2	3.1	6.9	57	152	474	398	249
7	33	16	7.1	5.2	3.1	3.3	6.7	52	151	483	397	156
8	32	19	7.2	5.3	e3.0	4.0	6.6	59	191	456	367	112
9	31	16	7.0	4.8	e2.9	4.0	5.9	92	254	434	376	94
10	32	e14	7.0	5.0	e2.7	3.6	6.0	119	298	456	366	85
11	37	e11	e6.8	4.9	e2.6	3.5	6.0	122	311	447	323	85
12	28	e11	e6.6	4.8	e2.6	3.8	6.4	153	292	425	290	94
13	34	e14	e6.4	4.8	e2.6	4.4	6.4	212	246	389	312	110
14	32	e17	6.3	4.7	2.7	4.6	6.6	273	178	358	276	133
15	31	e15	6.3	4.7	2.7	4.8	6.6	286	139	377	264	91
16	28	e13	6.4	4.5	2.7	5.0	7.0	300	119	375	274	82
17	29	e12	5.9	4.5	2.7	5.1	7.6	260	125	326	275	78
18	30	10	5.7	4.3	2.8	4.9	9.3	223	133	281	274	76
19	31	7.3	5.6	4.1	2.9	5.5	12	196	122	240	264	70
20	26	7.3	5.6	4.1	2.8	6.6	13	212	130	254	236	69
21	29	8.0	5.4	4.0	2.8	6.6	12	155	158	278	262	70
22	27	7.5	5.8	4.0	2.9	6.8	11	131	201	278	219	75
23	23	7.1	5.9	4.0	2.9	7.1	12	144	246	269	252	80
24	28	6.8	5.8	3.8	3.0	8.0	11	193	329	278	240	84
25	27	6.6	5.8	3.7	3.0	8.2	14	225	409	286	219	96
26	24	6.4	5.8	3.6	3.1	7.7	19	257	421	283	239	93
27	24	6.4	5.7	3.4	3.1	7.1	29	256	435	237	245	101
28	24	6.5	5.7	3.2	3.1	7.0	51	268	435	263	231	108
29	23	6.3	5.6	3.3	---	6.6	77	246	426	e279	232	98
30	23	6.7	5.5	3.4	---	6.3	80	243	400	e271	215	85
31	23	---	5.4	3.4	---	6.0	---	237	---	e269	199	---
TOTAL	971	348.9	195.0	136.4	81.0	159.3	460.5	5265	7516	10888	8924	3589
MEAN	31.3	11.6	6.29	4.40	2.89	5.14	15.4	170	251	351	288	120
MAX	54	20	7.3	5.3	3.2	8.2	80	300	435	483	425	249
MIN	23	6.3	5.4	3.2	2.6	3.1	5.9	42	119	237	199	69
AC-FT	1930	692	387	271	161	316	913	10440	14910	21600	17700	7120

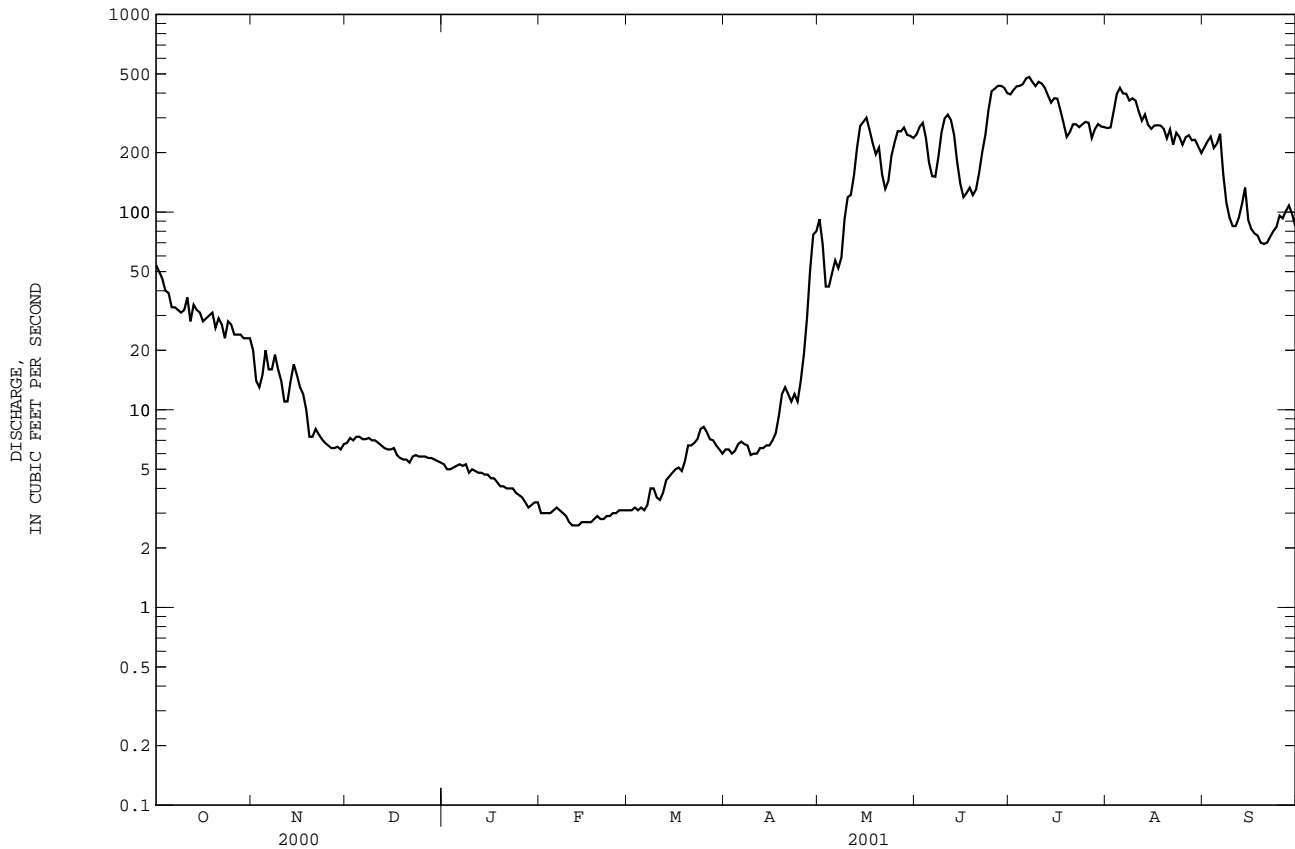
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2001, BY WATER YEAR (WY)

MEAN	42.3	20.2	12.4	8.57	7.54	8.48	19.9	165	453	478	319	137
MAX	72.5	40.6	22.8	19.2	12.5	13.6	60.3	299	739	794	406	250
(WY)	1968	1974	1974	1962	1962	1972	1962	1958	1971	1975	1971	1973
MIN	22.8	9.74	3.79	1.53	2.12	2.31	8.48	71.1	251	280	245	59.2
(WY)	1989	1977	1977	1977	1977	1977	1970	1959	2001	1992	1989	1964

06221400 DINWOODY CREEK ABOVE LAKES, NEAR BURRIS, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1958 - 2001	
ANNUAL TOTAL	43690.0		38534.1		--	
ANNUAL MEAN	119		106		140	
HIGHEST ANNUAL MEAN	--		--		179	
LOWEST ANNUAL MEAN	--		--		95.2	
HIGHEST DAILY MEAN	492	May 24	483	Jul 7	1250	Jun 15 1995
LOWEST DAILY MEAN	5.0	Jan 9	2.6	Feb 11	1.0	Jan 9 1977
ANNUAL SEVEN-DAY MINIMUM	5.1	Jan 7	2.7	Feb 10	1.3	Jan 4 1977
MAXIMUM PEAK FLOW	--		545		1510	
MAXIMUM PEAK STAGE	--		3.66		4.50	
ANNUAL RUNOFF (AC-FT)	86660		76430		101500	
10 PERCENT EXCEEDS	359		299		436	
50 PERCENT EXCEEDS	28		24		28	
90 PERCENT EXCEEDS	6.4		3.3		7.0	

e Estimated.



## YELLOWSTONE RIVER BASIN

06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY

LOCATION.--Lat 43°24'59", long 109°19'40", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.14, T.5 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 30 ft downstream from headworks, 2 mi southeast of Wilderness, and 4 mi northwest of Burris.

PERIOD OF RECORD.--May 1997 to September 1999, April to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above sea level, from topographic map. Miscellaneous measurements (July 1988 to September 1996) published at equivalent site previously identified as 432609109205001 at different datum.

REMARKS.--Records good. Flow completely regulated by headworks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	40	81	52	70	39
2	---	---	---	---	---	---	---	49	86	52	69	39
3	---	---	---	---	---	---	---	46	87	51	69	39
4	---	---	---	---	---	---	---	43	86	51	71	39
5	---	---	---	---	---	---	---	47	85	51	75	39
6	---	---	---	---	---	---	---	55	83	51	77	39
7	---	---	---	---	---	---	---	58	84	53	76	40
8	---	---	---	---	---	---	---	70	85	53	77	39
9	---	---	---	---	---	---	---	77	84	53	76	39
10	---	---	---	---	---	---	e3.0	81	86	52	77	51
11	---	---	---	---	---	---	e5.0	83	86	52	76	68
12	---	---	---	---	---	---	e5.0	81	83	52	74	68
13	---	---	---	---	---	---	e5.0	67	69	35	64	67
14	---	---	---	---	---	---	e5.0	77	69	21	58	69
15	---	---	---	---	---	---	e5.0	80	72	21	58	68
16	---	---	---	---	---	---	e5.0	79	71	21	57	66
17	---	---	---	---	---	---	7.4	79	73	21	57	65
18	---	---	---	---	---	---	9.9	88	73	21	56	65
19	---	---	---	---	---	---	7.2	91	78	20	55	66
20	---	---	---	---	---	---	5.8	90	83	20	65	65
21	---	---	---	---	---	---	5.5	89	83	20	69	65
22	---	---	---	---	---	---	5.4	87	83	27	68	65
23	---	---	---	---	---	---	5.4	80	84	46	50	64
24	---	---	---	---	---	---	5.4	77	84	45	41	63
25	---	---	---	---	---	---	5.4	76	85	53	41	63
26	---	---	---	---	---	---	9.7	77	65	54	40	63
27	---	---	---	---	---	---	11	78	54	70	40	64
28	---	---	---	---	---	---	29	77	54	75	40	65
29	---	---	---	---	---	---	35	81	53	74	40	66
30	---	---	---	---	---	---	34	84	52	72	39	66
31	---	---	---	---	---	---	---	86	---	70	39	---
TOTAL	---	---	---	---	---	---	---	2273	2301	1409	1864	1714
MEAN	---	---	---	---	---	---	---	73.3	76.7	45.5	60.1	57.1
MAX	---	---	---	---	---	---	---	91	87	75	77	69
MIN	---	---	---	---	---	---	---	40	52	20	39	39
AC-FT	---	---	---	---	---	---	---	4510	4560	2790	3700	3400

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)\*

MEAN	---	---	---	---	---	---	---	66.5	63.9	55.1	57.6	54.0
MAX	---	---	---	---	---	---	---	73.3	76.7	65.4	60.1	62.2
(WY)	---	---	---	---	---	---	---	2001	2001	1997	1997	1998
MIN	---	---	---	---	---	---	---	59.7	54.5	45.5	53.3	42.6
(WY)	---	---	---	---	---	---	---	1998	1999	2001	1999	1997

06222100 UPPER WIND RIVER A CANAL AT HEADWORKS, NEAR BURRIS, WY--Continued

## SUMMARY STATISTICS

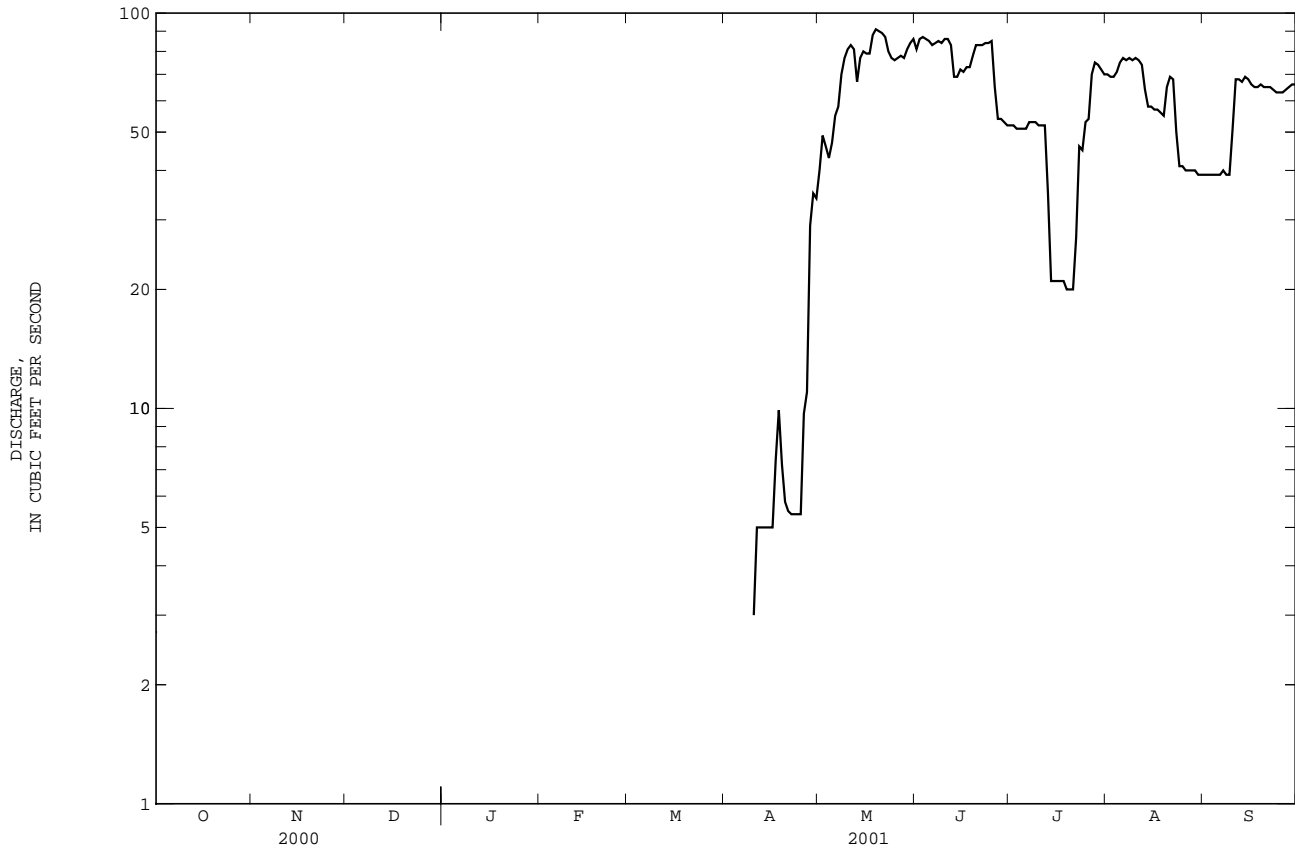
FOR 2001 WATER YEAR\*

WATER YEARS 1997 - 2001\*

HIGHEST DAILY MEAN	91	May 19	105	Jun 3 1998
LOWEST DAILY MEAN	3.0	Apr 10	3.0	Apr 10 2001
MAXIMUM PEAK FLOW	96	May 19	250	May 1 1998
MAXIMUM PEAK STAGE	2.15	May 19	2.52	May 1 1998

\* For period of operation.

e Estimated.



## YELLOWSTONE RIVER BASIN

06222500 DRY CREEK NEAR BURRIS, WY

LOCATION.--Lat 43°20'11", long 109°17'55", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 12, T.4 N., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.9 mi upstream from Dry Creek Canal headgate and 2.4 mi southwest of Burris.

DRAINAGE AREA.--57 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1921 to September 1940, October 1988 to current year (no winter records since 1995). Published as "near Lenore" 1921 to 1924.

GAGE.--Water-stage recorder. Elevation of gage is 6,430 ft above sea level, from topographic map. Prior to Nov. 5, 1934, at site 50 ft downstream at datum 4.07 ft higher. Nov. 5, 1934 to September 1940, at site 5 ft downstream at datum 3.00 ft higher.

REMARKS.-- Records fair. Adjudicated diversion upstream for irrigation of 267 acres. U.S. Geological Survey data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made during the period when the station was not in operation, is given below:

Oct. 2 . . . 9.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	1.3	24	73	68	19	19
2	---	---	---	---	---	---	1.3	19	78	65	18	18
3	---	---	---	---	---	---	1.3	14	83	61	18	17
4	---	---	---	---	---	---	1.4	13	74	60	19	17
5	---	---	---	---	---	---	1.4	11	61	59	19	17
6	---	---	---	---	---	---	1.4	14	51	58	20	20
7	---	---	---	---	---	---	1.4	12	43	63	21	22
8	---	---	---	---	---	---	1.4	15	44	62	21	22
9	---	---	---	---	---	---	1.4	26	50	64	22	20
10	---	---	---	---	---	---	1.4	37	60	73	23	18
11	---	---	---	---	---	---	1.5	41	59	72	23	17
12	---	---	---	---	---	---	1.5	48	56	67	23	16
13	---	---	---	---	---	---	1.5	75	56	64	22	15
14	---	---	---	---	---	---	1.5	109	51	59	21	16
15	---	---	---	---	---	---	1.5	122	46	68	22	16
16	---	---	---	---	---	---	1.6	184	40	71	22	16
17	---	---	---	---	---	---	1.6	129	38	64	21	16
18	---	---	---	---	---	---	1.6	99	39	56	20	16
19	---	---	---	---	---	---	1.6	86	38	47	19	17
20	---	---	---	---	---	---	1.7	83	36	43	18	16
21	---	---	---	---	---	---	1.9	69	38	40	19	15
22	---	---	---	---	---	---	1.8	58	44	36	19	14
23	---	---	---	---	---	---	1.8	54	54	31	19	13
24	---	---	---	---	---	---	1.8	61	63	25	22	13
25	---	---	---	---	---	---	2.0	70	73	24	22	12
26	---	---	---	---	---	---	2.4	83	76	24	21	12
27	---	---	---	---	---	---	3.4	99	79	23	20	12
28	---	---	---	---	---	---	11	95	81	22	20	12
29	---	---	---	---	---	---	15	84	77	21	19	12
30	---	---	---	---	---	---	18	77	72	20	19	12
31	---	---	---	---	---	1.3	---	73	---	19	19	---
TOTAL	---	---	---	---	---	1.3	88.4	1984	1733	1529	630	478
MEAN	---	---	---	---	---	1.30	2.95	64.0	57.8	49.3	20.3	15.9
MAX	---	---	---	---	---	1.3	18	184	83	73	23	22
MIN	---	---	---	---	---	1.3	1.3	11	36	19	18	12
AC-FT	---	---	---	---	---	2.6	175	3940	3440	3030	1250	948

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2001, BY WATER YEAR (WY)\*

MEAN	17.3	10.3	5.97	4.10	2.71	2.91	8.93	86.8	201	123	57.7	31.2
MAX	50.0	25.4	15.0	10.0	7.00	10.0	25.7	162	525	328	164	64.6
(WY)	1924	1928	1926	1926	1923	1923	1926	1924	1921	1995	1930	1927
MIN	5.16	1.76	.55	.30	.20	.000	.88	29.5	51.4	33.8	18.8	12.2
(WY)	1934	1934	1934	1934	1934	1934	1940	1935	1934	1940	1940	1934

06222500 DRY CREEK NEAR BURRIS, WY--Continued

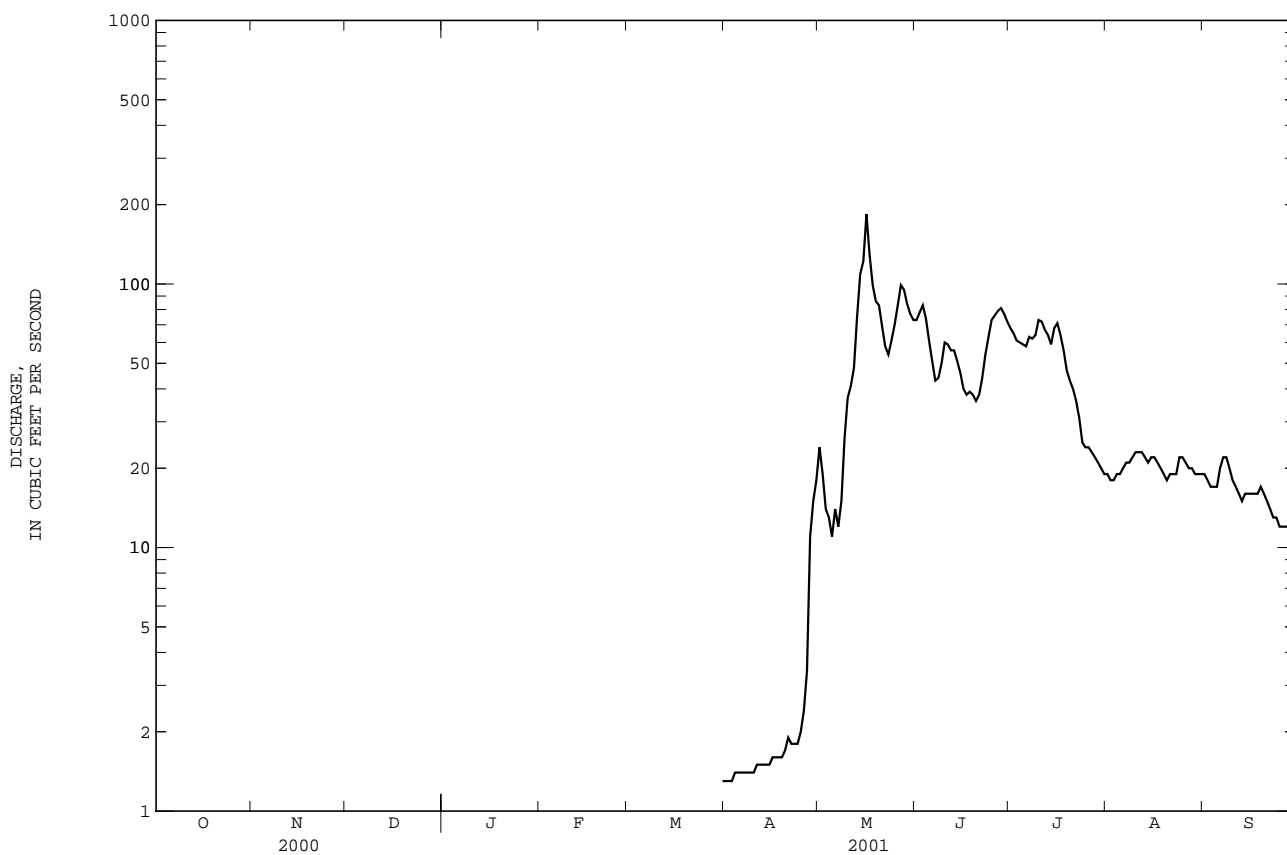
SUMMARY STATISTICS	FOR 2001 WATER YEAR*	WATER YEARS 1921 - 2001*
ANNUAL MEAN	--	44.6
HIGHEST ANNUAL MEAN	--	73.0 1995
LOWEST ANNUAL MEAN	--	20.1 1940
HIGHEST DAILY MEAN	184 May 16	1240 Jun 7 1921
LOWEST DAILY MEAN	1.3 Mar 31	.00 Mar 1 to
		Apr 11 1934
MAXIMUM PEAK FLOW	234 May 16	1400 <sup>a</sup> Jun 12 1921
MAXIMUM PEAK STAGE	4.38 May 16	5.95 <sup>b</sup> Jun 17 1999
ANNUAL RUNOFF (AC-FT)	--	32290

\* For period of operation.

a Gage height, 3.9 ft, from floodmarks, site and datum then in use, from rating curve extended above 580 ft<sup>3</sup>/s.

b From floodmarks.

e Estimated.



## YELLOWSTONE RIVER BASIN

06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY

LOCATION.--Lat 43°20'38", long 109°17'25", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.12, T.4 S., R.5 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 200 ft downstream from headgate and 1.7 miles southwest of Burris.

PERIOD OF RECORD.--April 1989 to September 1999, April to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of the gage is 6,360 ft above sea level, from topographic map. Prior to April 1, 1990, at datum 1.00 ft higher.

REMARKS.--Records good. Flow is diverted from Dry Creek and Dinwoody Canal for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	33	213	236	200	193
2	---	---	---	---	---	---	---	39	223	238	198	192
3	---	---	---	---	---	---	---	35	231	234	197	193
4	---	---	---	---	---	---	---	33	220	233	200	194
5	---	---	---	---	---	---	---	29	203	232	206	193
6	---	---	---	---	---	---	---	52	191	233	210	196
7	---	---	---	---	---	---	---	64	176	240	211	197
8	---	---	---	---	---	---	---	73	173	235	212	192
9	---	---	---	---	---	---	---	80	178	231	213	177
10	---	---	---	---	---	---	---	88	196	253	213	159
11	---	---	---	---	---	---	---	94	214	248	212	140
12	---	---	---	---	---	---	---	107	215	234	207	126
13	---	---	---	---	---	---	---	131	221	240	203	120
14	---	---	---	---	---	---	---	154	215	225	207	125
15	---	---	---	---	---	---	---	192	207	235	207	126
16	---	---	---	---	---	---	---	176	194	242	206	120
17	---	---	---	---	---	---	---	216	179	244	206	111
18	---	---	---	---	---	---	---	196	170	232	205	103
19	---	---	---	---	---	---	3.8	191	165	206	203	97
20	---	---	---	---	---	---	4.3	205	157	200	200	90
21	---	---	---	---	---	---	5.1	189	155	197	198	82
22	---	---	---	---	---	---	4.5	179	163	196	197	78
23	---	---	---	---	---	---	4.4	170	188	196	199	76
24	---	---	---	---	---	---	4.4	182	210	202	201	76
25	---	---	---	---	---	---	5.2	196	230	200	199	78
26	---	---	---	---	---	---	6.7	223	233	201	197	77
27	---	---	---	---	---	---	9.2	236	244	202	197	76
28	---	---	---	---	---	---	19	227	249	199	197	77
29	---	---	---	---	---	---	22	228	243	199	197	78
30	---	---	---	---	---	---	22	216	239	199	196	78
31	---	---	---	---	---	---	---	211	---	198	195	---
TOTAL	---	---	---	---	---	---	---	4445	6095	6860	6289	3820
MEAN	---	---	---	---	---	---	---	143	203	221	203	127
MAX	---	---	---	---	---	---	---	236	249	253	213	197
MIN	---	---	---	---	---	---	---	29	155	196	195	76
AC-FT	---	---	---	---	---	---	---	8820	12090	13610	12470	7580

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)\*

MEAN	1.44	---	---	---	---	---	3.01	101	187	202	191	131
MAX	2.29	---	---	---	---	---	6.24	154	247	228	217	188
(WY)	1993	---	---	---	---	---	1989	1994	1994	1996	1994	1990
MIN	.60	---	---	---	---	---	.000	53.8	116	155	169	90.2
(WY)	1994	---	---	---	---	---	1991	1991	1995	1989	1998	1992



06222510 DRY CREEK CANAL AT HEADGATE, NEAR BURRIS, WY--Continued

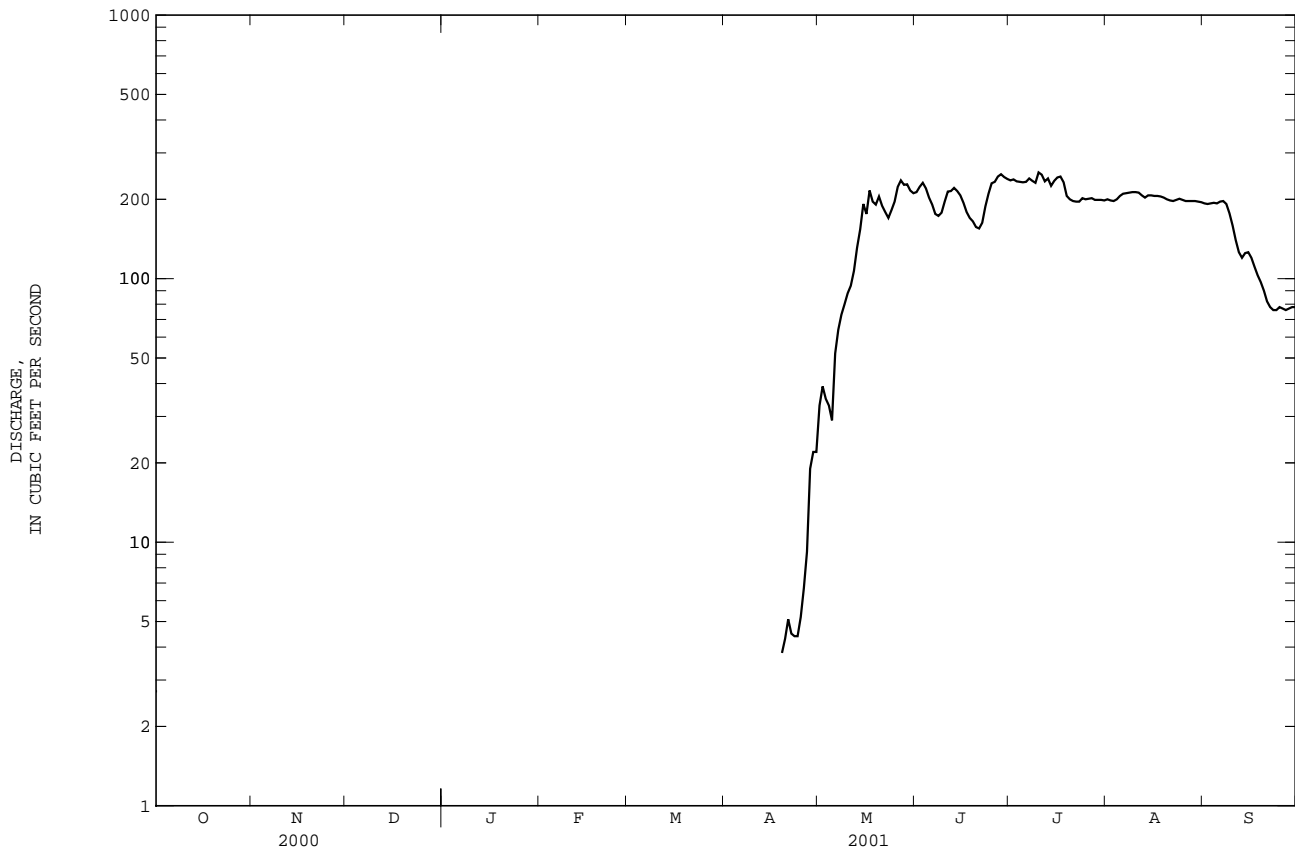
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1988 - 2001\*

HIGHEST DAILY MEAN	253	Jul 10	285	Jun 23 1994
LOWEST DAILY MEAN	3.8	Apr 19	.00	Many days,
				most years
MAXIMUM PEAK FLOW	260	Jul 10	301	Jun 23 1994
MAXIMUM PEAK STAGE	3.06	Jul 10	3.88	Jun 23 1994

\* For period of operation.



06222600 WIND RIVER ABOVE CROW CREEK, NEAR LENORE, WY

LOCATION.--Lat 43°21'12", long 109°11'19", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.1, T.4 N., R.4 W., Fremont County, Hydrologic Unit 10080001, at county bridge on Lenore Bridge Road about 2.5 mi north of Crowheart, 2.5 mi northwest of the old Lenore townsite, and 2.8 mi above Crow Creek.

PERIOD OF RECORD.--July to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]

06222600 WIND RIVER ABOVE CROW CREEK, NEAR LENORE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE (UG/L) (34653)	PARA- THION, DIS- (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)
JUL 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 15...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)			
JUL 25...	--	--	--	--	--	--	--	--	6	5.8			
AUG 15...	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	7	5.9			
SEP 25...	--	--	--	--	--	--	--	--	33	12			

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06223500 WILLOW CREEK NEAR CROWHEART, WY

LOCATION.--Lat 43°17'00", long 109°11'08", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.36, T.4 N., R.4 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 1000 ft upstream from Willow Creek Canal diversion and 2.0 mi south of Crowheart.

DRAINAGE AREA.--55.4 mi<sup>2</sup>.

PERIOD OF RECORD.--June to October 1909 (published as "J. K. Ranch Post Office"), June 1921 to September 1922 (published as "near Lenore"), May and June 1923, May 1925 to September 1940, October 1988 to current year (no winter record since 1995).

REVISED RECORDS.--WSP 1309: 1939 (M).

GAGE.--Water-stage recorder. Elevation of gage is 6,080 ft above sea level, from topographic map. May 17 to October 31, 1909, nonrecording gage 1.9 mi downstream at different datum, May 16, 1921 to Aug. 24, 1923, nonrecording gage 200 ft upstream at different datum, and May 1925 to September 1940, water-stage recorder 600 ft downstream at different datum.

REMARKS.--Records fair. Diversions for irrigation of 60.1 acres upstream from station. Results of discharge measurements, in cubic feet per second, made during the period station was not in operation, are given below:

Oct. 2 . . . 7.09  
Mar. 30 . . . 4.53

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.6	6.6	14	6.9	5.0	4.5
2	---	---	---	---	---	---	4.6	6.9	14	6.7	4.9	4.4
3	---	---	---	---	---	---	4.7	6.9	14	6.6	4.8	4.4
4	---	---	---	---	---	---	4.7	6.9	10	6.5	4.8	4.4
5	---	---	---	---	---	---	4.8	6.7	9.8	6.5	4.7	4.5
6	---	---	---	---	---	---	4.8	6.8	9.2	6.4	4.6	5.0
7	---	---	---	---	---	---	4.8	6.8	8.9	6.4	4.6	4.8
8	---	---	---	---	---	---	4.9	6.9	8.8	6.5	4.5	5.0
9	---	---	---	---	---	---	4.7	7.0	9.4	6.7	4.9	4.6
10	---	---	---	---	---	---	4.8	7.1	9.9	7.0	4.9	4.5
11	---	---	---	---	---	---	4.9	7.4	9.1	6.7	4.8	4.5
12	---	---	---	---	---	---	5.1	7.7	9.4	6.6	4.7	4.5
13	---	---	---	---	---	---	5.0	21	9.2	6.4	4.7	4.6
14	---	---	---	---	---	---	5.0	66	8.7	6.4	4.7	4.9
15	---	---	---	---	---	---	5.0	71	8.2	6.8	4.8	5.0
16	---	---	---	---	---	---	5.1	113	8.1	6.4	4.8	4.6
17	---	---	---	---	---	---	5.2	37	8.1	6.1	4.6	4.6
18	---	---	---	---	---	---	5.2	27	8.1	6.1	4.5	4.5
19	---	---	---	---	---	---	5.3	18	8.3	6.1	4.4	4.4
20	---	---	---	---	---	---	5.5	24	8.1	5.9	4.4	4.4
21	---	---	---	---	---	---	5.6	14	8.0	5.7	4.5	4.7
22	---	---	---	---	---	---	5.6	11	7.8	5.7	4.5	4.7
23	---	---	---	---	---	---	5.6	12	7.6	5.7	4.4	4.5
24	---	---	---	---	---	---	5.6	22	7.5	5.5	4.3	4.5
25	---	---	---	---	---	---	5.6	25	7.5	5.4	4.3	4.5
26	---	---	---	---	---	---	5.6	29	7.5	5.4	4.3	4.5
27	---	---	---	---	---	---	5.9	35	7.6	5.2	4.3	4.6
28	---	---	---	---	---	---	6.2	23	7.3	5.1	4.3	4.6
29	---	---	---	---	---	---	6.4	15	7.0	5.0	4.3	4.7
30	---	---	---	---	---	---	6.5	15	7.0	4.9	4.4	4.7
31	---	---	---	---	---	---	---	14	---	4.9	4.5	---
TOTAL	---	---	---	---	---	---	157.3	675.7	268.1	188.2	142.2	138.1
MEAN	---	---	---	---	---	---	5.24	21.8	8.94	6.07	4.59	4.60
MAX	---	---	---	---	---	---	6.5	113	14	7.0	5.0	5.0
MIN	---	---	---	---	---	---	4.6	6.6	7.0	4.9	4.3	4.4
AC-FT	---	---	---	---	---	---	312	1340	532	373	282	274

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2001, BY WATER YEAR (WY)\*

	MEAN	9.03	7.53	6.15	5.25	4.76	4.96	6.48	30.5	81.8	30.5	12.6	9.13
MAX	17.6	13.3	10.0	8.00	7.00	8.00	9.40	79.6	242	112	45.4	21.9	
(WY)	1931	1927	1927	1927	1922	1922	1999	1999	1999	1995	1930	1930	
MIN	5.15	2.50	2.00	2.00	2.00	2.50	3.97	6.85	8.94	5.68	3.50	4.60	
(WY)	1989	1940	1940	1940	1940	1940	1940	1935	2001	1940	1940	2001	

06223500 WILLOW CREEK NEAR CROWHEART, WY--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

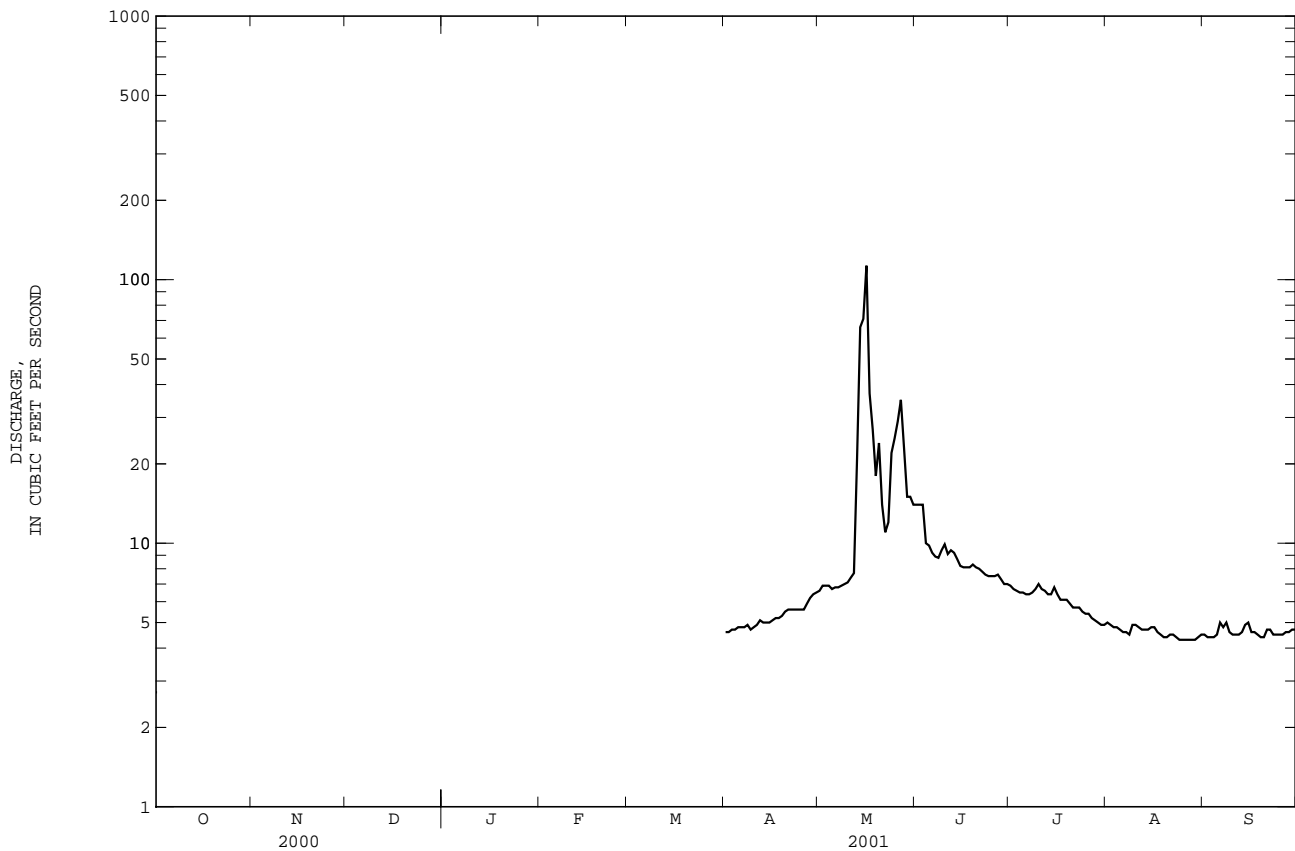
WATER YEARS 1922 - 2001\*

ANNUAL MEAN	--		16.5	
HIGHEST ANNUAL MEAN	--		31.0	1995
LOWEST ANNUAL MEAN	--		4.60	1940
HIGHEST DAILY MEAN	113	May 16	468	Jun 12 1991
LOWEST DAILY MEAN	4.3	Aug 24-29	2.0	Dec 1 1939
ANNUAL SEVEN-DAY MINIMUM	--		2.0	Dec 1 1939
MAXIMUM PEAK FLOW	178	May 16	1100 <sup>a</sup>	May 31 1939
MAXIMUM PEAK STAGE	3.40	May 16	5.40 <sup>b</sup>	May 31 1939
ANNUAL RUNOFF (AC-FT)	--		11930	

\* For period of operation.

a On basis of flow-over-dam measurement of peak flow.

b Site and datum then in use.



## YELLOWSTONE RIVER BASIN

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY

LOCATION.--Lat 43°10'37", long 109°12'08", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.2, T.2 N., R.4 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 1.2 mi upstream from high-water line of Bull Lake and 9.0 mi south of Crowheart.

DRAINAGE AREA.--187 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1941 to December 1953, October 1966 to current year. Monthly discharge only for some periods, published in WSP 1309. Prior to October 1950, published as "above Bull Lake Reservoir."

GAGE.--Water-stage recorder. Elevation of gage is 5,874 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	59	e19	e22	13	e15	14	158	728	588	270	187
2	90	52	e19	e22	12	e13	15	144	774	564	265	183
3	83	46	e19	e21	12	e13	15	131	836	550	274	190
4	79	52	e20	e21	12	e13	16	122	729	541	290	192
5	75	50	e20	e20	12	e13	17	122	570	523	328	189
6	72	45	e21	19	12	e13	18	134	439	e500	340	196
7	70	40	e21	17	12	e13	18	126	374	e510	336	200
8	67	36	e21	17	e11	e13	18	134	382	e520	333	180
9	66	44	e22	18	e11	e12	17	175	443	e500	334	153
10	66	31	e23	17	e10	e12	17	238	575	534	339	132
11	68	20	e22	17	13	e12	19	280	648	537	317	117
12	70	22	e22	16	13	e13	20	346	665	515	293	108
13	71	25	e21	17	13	12	19	489	658	477	283	104
14	70	27	e17	16	13	12	18	751	542	436	277	103
15	71	34	e16	15	12	12	18	930	430	431	271	113
16	70	33	e17	17	13	12	19	1620	349	484	263	113
17	69	29	e20	16	12	12	19	1410	314	478	263	107
18	70	29	e22	17	13	13	22	942	313	422	260	109
19	68	29	e22	16	13	13	27	746	311	369	257	104
20	66	28	e23	16	13	15	27	698	314	332	239	99
21	65	28	e22	16	13	15	28	586	336	323	229	91
22	66	27	e20	16	13	15	30	471	385	325	221	84
23	67	26	e21	16	13	15	30	440	466	318	215	81
24	67	25	e22	15	14	15	29	538	561	309	217	80
25	67	24	e23	14	14	15	28	678	667	306	216	80
26	64	24	e22	14	14	15	29	800	726	305	209	83
27	63	23	e23	14	e14	15	e40	908	717	289	211	85
28	61	21	e23	14	e14	15	e110	945	724	268	212	87
29	60	e19	e24	12	---	15	e135	848	693	269	206	90
30	59	e19	e24	13	---	15	124	769	640	266	200	93
31	60	---	e23	13	---	14	---	726	---	268	190	---
TOTAL	2154	967	654	514	354	420	956	17405	16309	13057	8158	3733
MEAN	69.5	32.2	21.1	16.6	12.6	13.5	31.9	561	544	421	263	124
MAX	94	59	24	22	14	15	135	1620	836	588	340	200
MIN	59	19	16	12	10	12	14	122	311	266	190	80
AC-FT	4270	1920	1300	1020	702	833	1900	34520	32350	25900	16180	7400

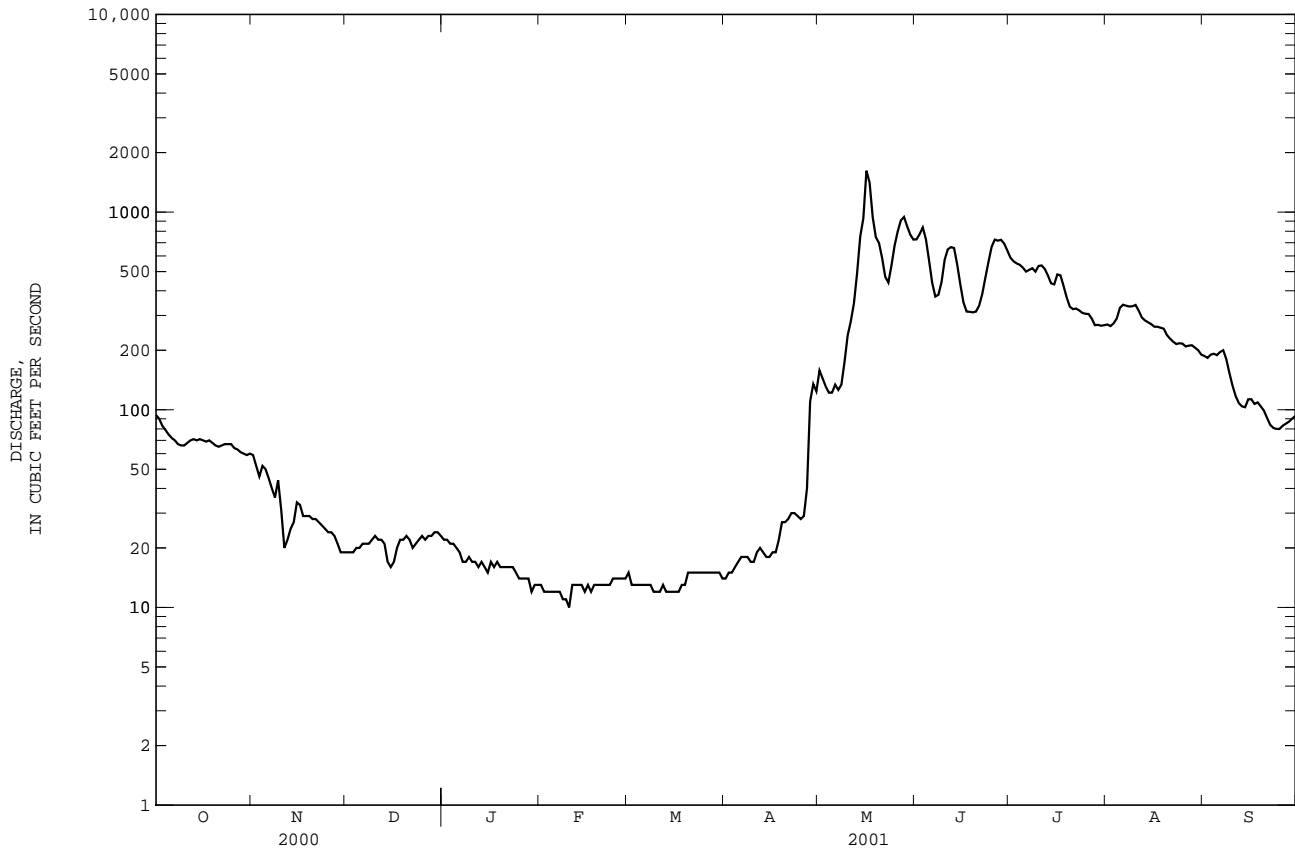
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2001, BY WATER YEAR (WY)

	MEAN	99.0	55.1	37.2	28.7	25.0	26.7	66.3	472	1151	910	429	206
MAX	222	109	62.2	57.1	41.4	57.4	199	777	2104	1581	655	533	
(WY)	1983	1951	1951	1997	1943	1986	1943	1969	1986	1975	1982	1973	
MIN	32.9	29.5	14.6	7.29	6.88	6.69	24.9	170	544	337	145	109	
(WY)	1989	1977	1977	1977	1977	1977	1970	1975	2001	1994	1985	1988	

06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1942 - 2001	
ANNUAL TOTAL	83789		64681		--	
ANNUAL MEAN	229		177		293	
HIGHEST ANNUAL MEAN	--		--		415	
LOWEST ANNUAL MEAN	--		--		174	
HIGHEST DAILY MEAN	1300	May 25	1620	May 16	3560	Jun 9 1981
LOWEST DAILY MEAN	11	Jan 3	10	Feb 10	6.2	Jan 9 1977
ANNUAL SEVEN-DAY MINIMUM	15	Jan 3	11	Feb 4	6.5	Mar 10 1977
MAXIMUM PEAK FLOW	--		1880	May 16	4470	Jun 9 1981
MAXIMUM PEAK STAGE	--		5.44	May 16	7.98	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	166200		128300		212500	
10 PERCENT EXCEEDS	680		539		907	
50 PERCENT EXCEEDS	67		63		76	
90 PERCENT EXCEEDS	20		13		22	

e Estimated.







06224000 BULL LAKE CREEK ABOVE BULL LAKE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUL 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)		
JUL 24...	--	--	--	--	--	--	--	--	--	--	2	1.5	
AUG 23...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	2	1.2		
SEP 21...	--	--	--	--	--	--	--	--	--	1	.24		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06224500 BULL LAKE NEAR LENORE, WY

LOCATION.--Lat 43°12'35", long 109°02'30", in E<sup>1</sup>/<sub>2</sub> NW<sup>1</sup>/<sub>4</sub> sec.30, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, at dam on Bull Lake Creek, 2.8 mi upstream from mouth of Bull Lake Creek, and 9.8 mi south of Lenore.

DRAINAGE AREA.--210 mi<sup>2</sup>, of which 12 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--April 1938 to current year. Monthend contents only for some periods, published in WSP 1309. Published as Bull Lake Reservoir near Lenore 1938-50.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum).

REMARKS.--Reservoir is formed by rockfill dam completed by Bureau of Reclamation July 22, 1938. Capacity, 152,500 acre-ft below elevation 5,805.00 ft, top of spillway gates. Dead storage, 722 acre-ft. Figures given herein represent total contents. Water is used for irrigation near Riverton. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 154,200 acre-ft, Aug. 10, 1965, elevation, 5,805.70 ft; minimum daily contents (since appreciable storage was attained), 5,540 acre-ft, Mar. 15, 1950, elevation, 5,742.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 82,100 acre-ft, June 4, July 7-14, maximum daily elevation, 5,780.30 ft, June 4; minimum daily contents, 22,300 acre-ft, Sept. 2, minimum daily elevation, 5,752.26 ft, Sept. 2-3.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

5,750	18,391	5,780	81,400
5,760	36,722	5,790	108,000
5,770	57,600		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

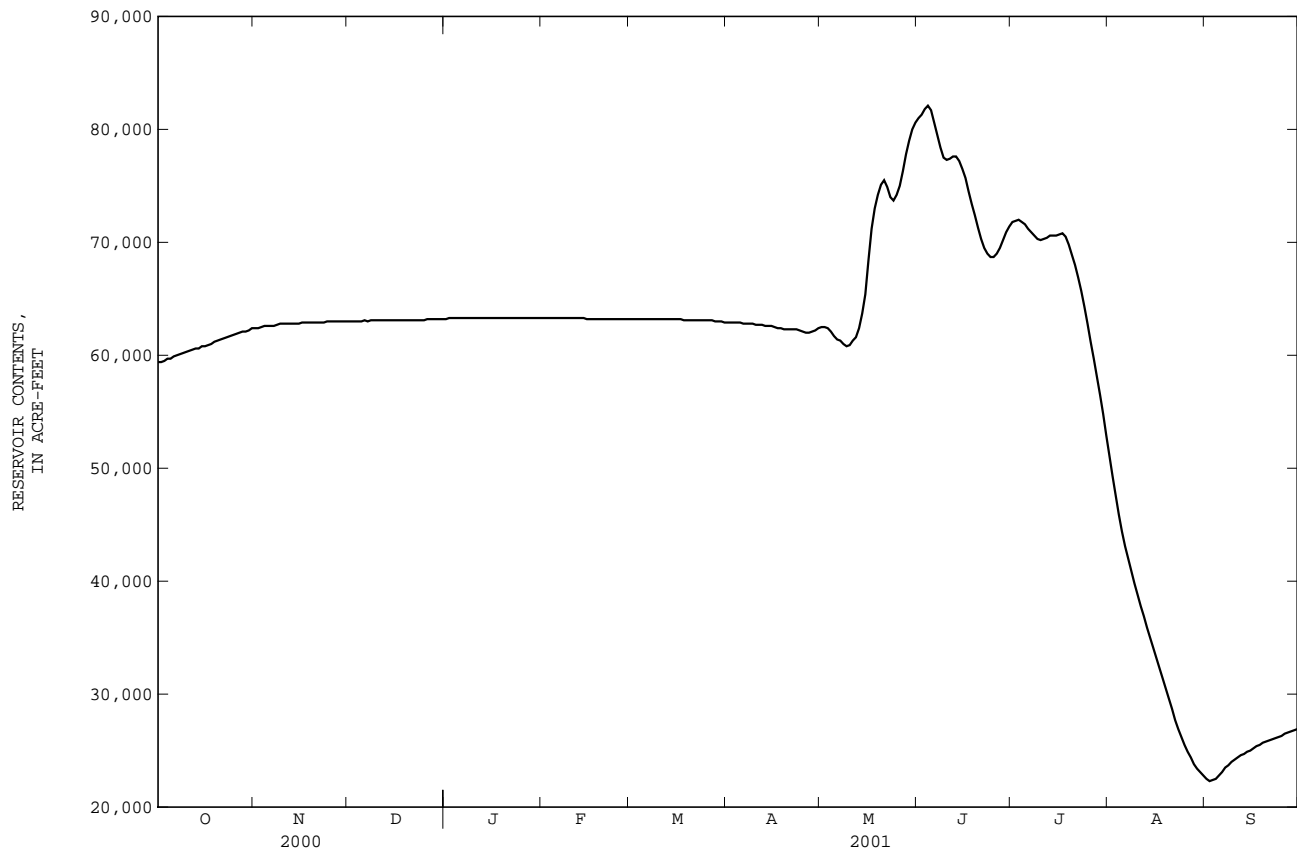
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59400	62400	63000	63200	63300	63200	62900	62500	81000	71800	51100	22500
2	59400	62400	63000	63300	63300	63200	62900	62500	81300	71900	49300	22300
3	59500	62500	63000	63300	63300	63200	62900	62400	81800	72000	47600	22400
4	59700	62600	63000	63300	63300	63200	62900	62100	82100	71800	45900	22500
5	59700	62600	63000	63300	63300	63200	62900	61700	81700	71600	44400	22800
6	59900	62600	63100	63300	63300	63200	62800	61400	80600	71200	43100	23100
7	60000	62600	63000	63300	63300	63200	62800	61300	79500	70900	42000	23500
8	60100	62700	63100	63300	63300	63200	62800	61000	78400	70600	40900	23700
9	60200	62800	63100	63300	63300	63200	62800	60800	77500	70300	39800	24000
10	60300	62800	63100	63300	63300	63200	62700	60900	77300	70200	38800	24200
11	60400	62800	63100	63300	63300	63200	62700	61300	77400	70300	37800	24400
12	60500	62800	63100	63300	63300	63200	62700	61600	77600	70400	36900	24600
13	60600	62800	63100	63300	63300	63200	62600	62400	77600	70600	35900	24700
14	60600	62800	63100	63300	63300	63200	62600	63700	77200	70600	35000	24900
15	60800	62800	63100	63300	63200	63200	62600	65400	76500	70600	34100	25000
16	60800	62900	63100	63300	63200	63200	62500	68400	75700	70700	33200	25200
17	60900	62900	63100	63300	63200	63200	62400	71200	74500	70800	32300	25400
18	61000	62900	63100	63300	63200	63100	62400	73000	73400	70500	31400	25500
19	61200	62900	63100	63300	63200	63100	62300	74200	72400	69800	30500	25700
20	61300	62900	63100	63300	63200	63100	62300	75100	71300	68900	29600	25800
21	61400	62900	63100	63300	63200	63100	62300	75500	70300	68000	28700	25900
22	61500	62900	63100	63300	63200	63100	62300	74900	69500	66900	27700	26000
23	61600	62900	63100	63300	63200	63100	62300	74000	69000	65700	26900	26100
24	61700	63000	63100	63300	63200	63100	62200	73700	68700	64300	26200	26200
25	61800	63000	63100	63300	63200	63100	62100	74200	68700	62800	25500	26300
26	61900	63000	63200	63300	63200	63100	62000	75000	69000	61200	24900	26500
27	62000	63000	63200	63300	63200	63100	62000	76300	69500	59700	24400	26600
28	62100	63000	63200	63300	63200	63000	62100	77800	70200	58100	23800	26700
29	62100	63000	63200	63300	---	63000	62200	79000	70900	56500	23400	26800
30	62200	63000	63200	63300	---	63000	62400	80000	71400	54800	23100	26900
31	62400	---	63200	63300	---	62900	---	80600	---	52900	22800	---
MAX	62400	63000	63200	63300	63300	63200	62900	80600	82100	72000	51100	26900
MIN	59400	62400	63000	63200	63200	62900	62000	60800	68700	52900	22800	22300
(#)	5772.10	5772.39	5772.48	5772.51	5772.48	5772.35	5772.12	5779.69	5775.96	5767.89	5752.51	5754.78
(*)	3,000	600	200	100	-100	-300	-500	+18,200	-9,200	-18,500	-30,100	-4,100

WTR YR 2001 MAX 82,100 MIN 22,300 (\*) -40,700

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.

06224500 BULL LAKE NEAR LENORE, WY--Continued



## YELLOWSTONE RIVER BASIN

06225000 BULL LAKE CREEK NEAR LENORE, WY

LOCATION.--Lat 43°14'33", long 109°01'20", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.17, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 700 ft upstream from mouth, 2.8 mi downstream from Bull Lake, and 8.5 mi southeast of Lenore.

DRAINAGE AREA.--213 mi<sup>2</sup>, of which 12 mi<sup>2</sup> probably is noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1918 to current year.

REVISED RECORDS.--WSP 1309: 1921 (M, date only), 1925(M), 1926(M), 1930(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,654 ft above sea level, from topographic map. May 18, 1918, to Mar. 25, 1922, at site 10 ft upstream at datum 0.86 ft higher; Mar. 26, 1922, to Oct. 3, 1934, at present site at datum 2.00 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Bull Lake 2.8 mi upstream since April 1938 (See station 06224500). Diversions upstream from station for irrigation of about 730 acres downstream. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	21	e26	23	e19	23	27	47	445	387	1200	315
2	75	22	e27	e22	19	23	27	129	575	438	1180	310
3	41	22	27	21	19	23	27	176	497	503	1160	182
4	25	22	e28	22	19	23	27	261	531	605	1130	53
5	19	22	28	22	20	23	27	324	768	643	1110	31
6	18	22	e28	22	20	23	27	266	916	692	1030	19
7	18	22	28	22	21	23	27	175	914	690	935	18
8	18	22	27	e22	e20	24	27	245	911	690	918	19
9	18	23	27	e22	e20	24	27	250	817	691	918	19
10	18	e23	e28	22	e21	23	28	115	631	613	891	19
11	18	e23	e28	22	e22	23	28	62	525	436	845	19
12	18	e23	e28	22	e22	22	28	161	570	398	816	19
13	18	e23	e29	22	e22	23	28	72	614	399	805	20
14	18	e24	e30	22	22	23	28	52	745	404	786	20
15	17	e24	e30	e21	e22	22	28	41	745	404	767	20
16	17	e24	e30	21	e23	23	42	41	750	403	755	20
17	17	e24	e31	e21	e23	23	64	43	855	409	737	20
18	16	e25	e31	e22	23	22	53	44	857	537	726	20
19	16	e25	e31	e22	22	23	37	130	858	706	712	20
20	16	e25	31	21	22	23	38	235	856	800	705	20
21	16	e25	e30	e20	22	13	38	348	851	794	719	20
22	17	e25	e29	e20	23	23	38	716	784	867	733	20
23	16	e26	e27	20	22	28	38	876	705	923	659	21
24	15	e26	25	e20	23	27	75	634	716	1030	580	20
25	15	e26	25	e20	23	27	94	402	677	1110	544	21
26	16	26	e24	20	22	28	88	356	569	1110	520	20
27	20	26	24	e20	23	27	59	223	477	1100	510	21
28	22	26	23	e20	23	26	45	185	376	1100	485	21
29	18	e26	e23	e20	---	28	44	187	334	1080	413	21
30	20	26	e23	e20	---	27	44	262	333	1140	365	21
31	21	---	e23	e20	---	27	---	326	---	1230	341	---
TOTAL	716	719	849	656	602	740	1208	7384	20202	22332	23995	1389
MEAN	23.1	24.0	27.4	21.2	21.5	23.9	40.3	238	673	720	774	46.3
MAX	99	26	31	23	23	28	94	876	916	1230	1200	315
MIN	15	21	23	20	19	13	27	41	333	387	341	18
AC-FT	1420	1430	1680	1300	1190	1470	2400	14650	40070	44300	47590	2760

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2001, BY WATER YEAR (WY)

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
MEAN	138	69.9	70.4	87.0	73.6	60.3	95.0	237	556	815	665	433
MAX	782	467	241	267	219	197	601	831	2265	1645	1027	982
(WY)	1952	1969	1972	1954	1951	1951	1965	1928	1918	1923	1969	1976
MIN	4.16	8.34	13.8	11.0	12.0	.000	3.59	6.01	10.6	85.6	193	46.3
(WY)	1941	1965	1978	1931	1931	1937	1941	1940	1941	1941	1977	2001

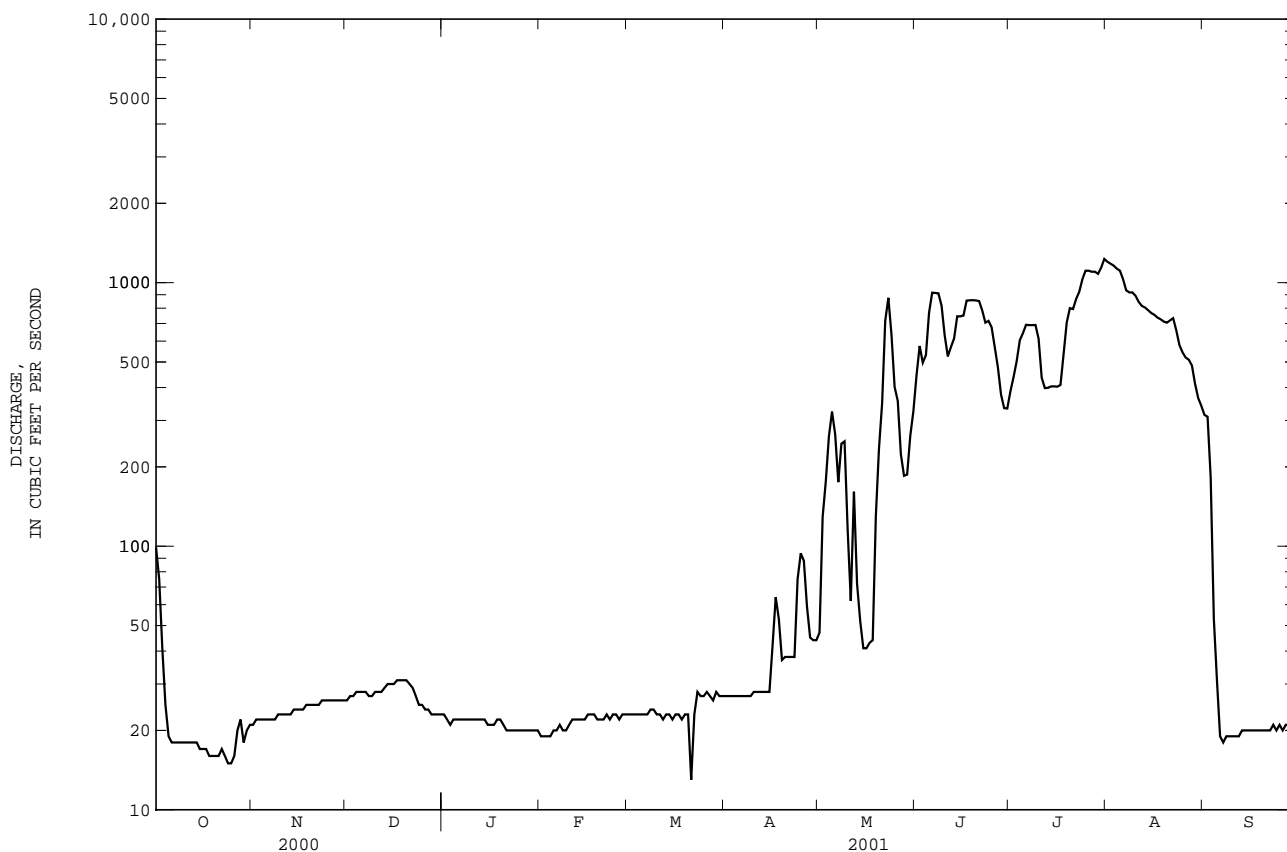
06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1918 - 2001	
ANNUAL TOTAL	94440		80792		--	
ANNUAL MEAN	258		221		275	
HIGHEST ANNUAL MEAN	--		--		427	
LOWEST ANNUAL MEAN	--		--		100	
HIGHEST DAILY MEAN	1160	Jul 25	1230	Jul 31	3900	Jun 16 1918
LOWEST DAILY MEAN	13	May 24	13	Mar 21	.00 <sup>a</sup>	Feb 28 to 1941
ANNUAL SEVEN-DAY MINIMUM	16	Oct 19	16	Oct 19	.00 <sup>b</sup>	Apr 7 1937
MAXIMUM PEAK FLOW	--		1280	Jul 30	6200 <sup>b</sup>	Feb 28 1937
MAXIMUM PEAK STAGE	--		3.61	Jul 30	7.09	Aug 8 1951
ANNUAL RUNOFF (AC-FT)	187300		160300		199300	Aug 8 1951
10 PERCENT EXCEEDS	910		785		808	
50 PERCENT EXCEEDS	30		27		106	
90 PERCENT EXCEEDS	22		20		20	

a Result of regulation.

b From rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Result of automatic spillway gates releasing at Bull Lake Dam.

e Estimated.





## YELLOWSTONE RIVER BASIN

87

06225000 BULL LAKE CREEK NEAR LENORE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUL 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)		
JUL 30...	--	--	--	--	--	--	--	--	--	4	11		
AUG 16...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	2	4.0		
SEP 21...	--	--	--	--	--	--	--	--	--	2	.10		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06225500 WIND RIVER NEAR CROWHEART, WY

LOCATION.--Lat 43°14'33", long 109°00'35", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.16, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on right bank 0.9 mi downstream from Bull Lake Creek and 9.0 mi southeast of Crowheart.

DRAINAGE AREA.--1,891 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to current year.

REVISED RECORDS.--WSP 1116: 1946-47. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,635 ft above sea level, from topographic map.

REMARKS.--Records good except those for Nov. 14 to Mar. 21, which are poor. Some regulation by Bull Lake on Bull Lake Creek (See station 06224500). Diversions for irrigation of about 25,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1927, reached a discharge of 13,000 ft<sup>3</sup>/s; discharge measurement made by Bureau of Reclamation at site 1.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	520	411	e300	e225	e230	e170	250	763	1550	1300	1520	698
2	513	393	e300	e190	e240	e175	270	827	1820	1310	1500	682
3	521	343	e310	e180	247	e200	270	708	1650	1320	1450	540
4	472	316	e320	e170	250	e190	258	703	1520	1390	1460	401
5	440	347	e330	e175	273	e220	252	738	1560	1440	1470	389
6	436	361	e325	e175	236	e230	251	857	1540	1470	1440	411
7	420	324	e310	e170	220	e240	254	754	1470	1530	1340	426
8	412	305	e290	e170	208	e270	255	780	1510	1580	1330	432
9	395	319	e280	e170	e190	e300	237	1070	1550	1600	1330	409
10	390	340	e260	e190	e220	314	225	1110	1530	1630	1340	377
11	398	327	e260	e180	e215	310	224	1030	1440	1540	1300	317
12	419	305	e260	e180	e210	284	241	1280	1440	1430	1250	301
13	412	298	e275	e180	e200	275	242	1460	1450	1350	1200	293
14	425	e310	e280	e195	e200	271	225	1710	1460	1290	1170	302
15	432	e325	e300	e190	e210	253	223	1890	1380	1280	1180	355
16	430	e320	e315	e190	e200	240	230	2520	1360	1330	1170	336
17	416	e310	e310	e180	e205	242	270	2170	1420	1250	1150	341
18	418	e300	e330	e180	e200	251	291	1600	1430	1280	1120	359
19	489	e305	e300	e180	e200	266	418	1400	1400	1350	1090	356
20	496	e310	e294	e190	e200	283	445	1450	1340	1380	1070	350
21	479	e315	e270	e190	e190	289	381	1350	1360	1340	1080	342
22	496	e320	e260	e200	e190	291	319	1450	1360	1390	1100	328
23	488	e320	e250	e190	e190	298	284	1630	1380	1400	1040	324
24	466	e310	e240	e190	e185	316	320	1750	1410	1480	972	320
25	477	e310	e230	e190	e170	329	345	1710	1470	1540	948	311
26	479	e310	e230	e190	e160	322	497	1760	1530	1510	902	317
27	461	e320	e225	e210	e155	303	743	1760	1520	1480	872	329
28	449	e310	e225	e210	e160	280	803	1770	1450	1420	847	339
29	426	e300	e225	e220	---	277	853	1530	1370	1390	775	352
30	414	e310	e220	e210	---	273	814	1450	1310	1460	729	367
31	421	---	e220	e210	---	268	---	1430	---	1540	710	---
TOTAL	13910	9694	8544	5870	5754	8230	10690	42410	43980	44000	35855	11404
MEAN	449	323	276	189	206	265	356	1368	1466	1419	1157	380
MAX	521	411	330	225	273	329	853	2520	1820	1630	1520	698
MIN	390	298	220	170	155	170	223	703	1310	1250	710	293
AC-FT	27590	19230	16950	11640	11410	16320	21200	84120	87230	87270	71120	22620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	MEAN	687	480	386	367	354	363	556	1778	3753	2903	1665	1149
MAX	1415	932	625	560	538	616	1284	2938	7259	5694	2483	1774	
(WY)	1952	1969	1972	1954	1951	1972	1952	1956	1971	1967	1951	1997	
MIN	371	298	215	179	202	226	309	729	1466	1362	853	380	
(WY)	1989	1978	1982	1982	1989	1977	1993	1977	2001	1992	1977	2001	

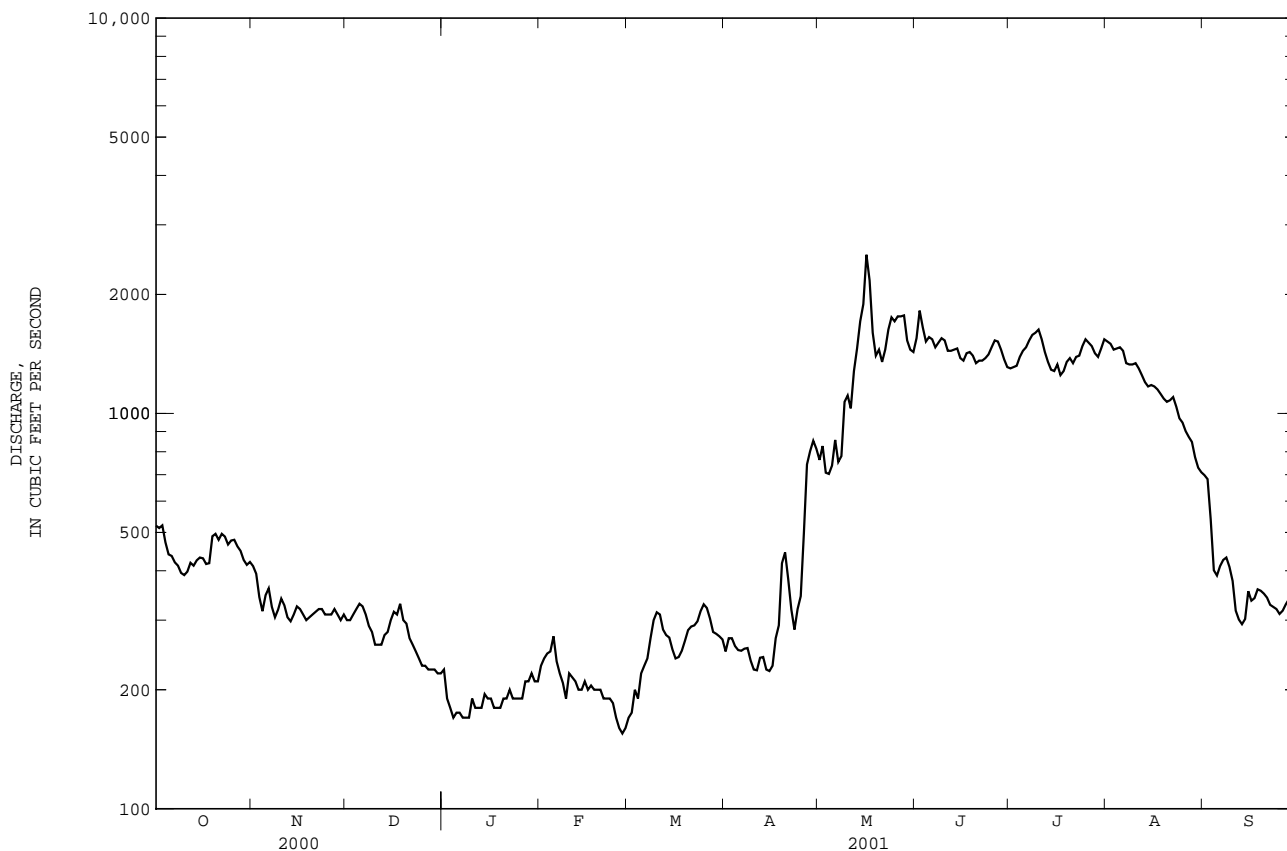


06225500 WIND RIVER NEAR CROWHEART, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1946 - 2001	
ANNUAL TOTAL	341532		240341		--	
ANNUAL MEAN	933		658		1207	
HIGHEST ANNUAL MEAN	--		--		1657	1999
LOWEST ANNUAL MEAN	--		--		658	2001
HIGHEST DAILY MEAN	3430	May 30	2520	May 16	11400	Jun 18, 19 1999
LOWEST DAILY MEAN	220	Dec 30	155	Feb 27	130	Feb 5 1982
ANNUAL SEVEN-DAY MINIMUM	225	Dec 25	168	Feb 24	143	Dec 30 1981
MAXIMUM PEAK FLOW	--		3570	May 16	14300 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--		8.17	May 16	11.23	Jun 19 1999
ANNUAL RUNOFF (AC-FT)	677400		476700		874100	
10 PERCENT EXCEEDS	1900		1470		2800	
50 PERCENT EXCEEDS	454		345		580	
90 PERCENT EXCEEDS	292		198		300	

a Gage height, 11.04 ft, from floodmarks.

e Estimated.



## YELLOWSTONE RIVER BASIN

06226000 WYOMING CANAL NEAR LENORE, WY

LOCATION.--Lat 43°13'45", long 108°53'40", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.17, T.3 N., R.1 W., Fremont County, Hydrologic Unit 10080001, on right bank 3.3 mi downstream from diversion dam on Wind River and 15 mi southeast of Lenore.

PERIOD OF RECORD.--May 1941 to September 1945 (irrigation season only), May 1949 to September 1982, April 1988 to current year. No winter record 1977-1978, and 1988 to current year. Monthly discharge only from some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 5,560.85 ft above sea level. May 1, 1941 to Sept. 30, 1945, nonrecording gage at site 3.2 mi upstream at different datum. May 3, 1949 to Oct. 2, 1952, and Apr. 12 to May 15, 1971, water-stage recorder at site 3.0 mi upstream at different datum.

REMARKS.--Records good. Flow used for irrigation on Riverton project. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	467	---	---	---	---	---	---	536	855	853	1090	345
2	460	---	---	---	---	---	47	539	1240	867	1070	333
3	477	---	---	---	---	---	159	447	1090	865	1020	187
4	460	---	---	---	---	---	161	425	962	942	1020	---
5	443	---	---	---	---	---	164	440	1000	1010	1020	---
6	442	---	---	---	---	---	173	530	1030	1050	1000	---
7	431	---	---	---	---	---	180	469	942	1100	896	---
8	423	---	---	---	---	---	194	420	957	1170	881	---
9	409	---	---	---	---	---	180	616	1020	1190	871	---
10	405	---	---	---	---	---	168	693	1020	1220	895	---
11	417	---	---	---	---	---	166	552	917	1170	859	---
12	443	---	---	---	---	---	187	676	879	1010	808	---
13	437	---	---	---	---	---	195	937	910	937	773	---
14	447	---	---	---	---	---	177	1160	1020	860	752	---
15	457	---	---	---	---	---	163	1380	927	838	753	---
16	456	---	---	---	---	---	149	1650	897	869	757	---
17	438	---	---	---	---	---	208	1780	962	778	746	---
18	444	---	---	---	---	---	224	1230	979	716	720	---
19	500	---	---	---	---	---	347	919	953	724	699	---
20	515	---	---	---	---	---	400	823	870	751	687	---
21	502	---	---	---	---	---	340	725	896	718	690	---
22	515	---	---	---	---	---	274	864	917	733	716	---
23	515	---	---	---	---	---	235	1020	923	762	667	---
24	490	---	---	---	---	---	269	1100	971	885	585	---
25	235	---	---	---	---	---	288	1050	1010	1140	566	---
26	---	---	---	---	---	---	377	1090	1090	1110	526	---
27	---	---	---	---	---	---	555	983	1100	1080	496	---
28	---	---	---	---	---	---	633	797	1040	1020	476	---
29	---	---	---	---	---	---	683	874	934	992	425	---
30	---	---	---	---	---	---	649	895	865	1030	379	---
31	---	---	---	---	---	---	---	826	---	1130	363	---
TOTAL	---	---	---	---	---	---	---	26446	29176	29520	23206	---
MEAN	---	---	---	---	---	---	---	853	973	952	749	---
MAX	---	---	---	---	---	---	---	1780	1240	1220	1090	---
MIN	---	---	---	---	---	---	---	420	855	716	363	---
AC-FT	---	---	---	---	---	---	---	52460	57870	58550	46030	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)\*

	195	184	199	199	201	224	298	719	1123	1259	989	699
MEAN	195	184	199	199	201	224	298	719	1123	1259	989	699
MAX	430	436	383	345	357	422	440	1201	1668	1736	1402	1168
(WY)	1994	1972	1958	1958	1954	1972	1980	2000	1990	1976	1995	1997
MIN	.000	.000	.000	.000	.000	.000	91.2	339	321	587	423	277
(WY)	1951	1951	1971	1971	1971	1971	1971	1942	1944	1941	1941	1994

## YELLOWSTONE RIVER BASIN

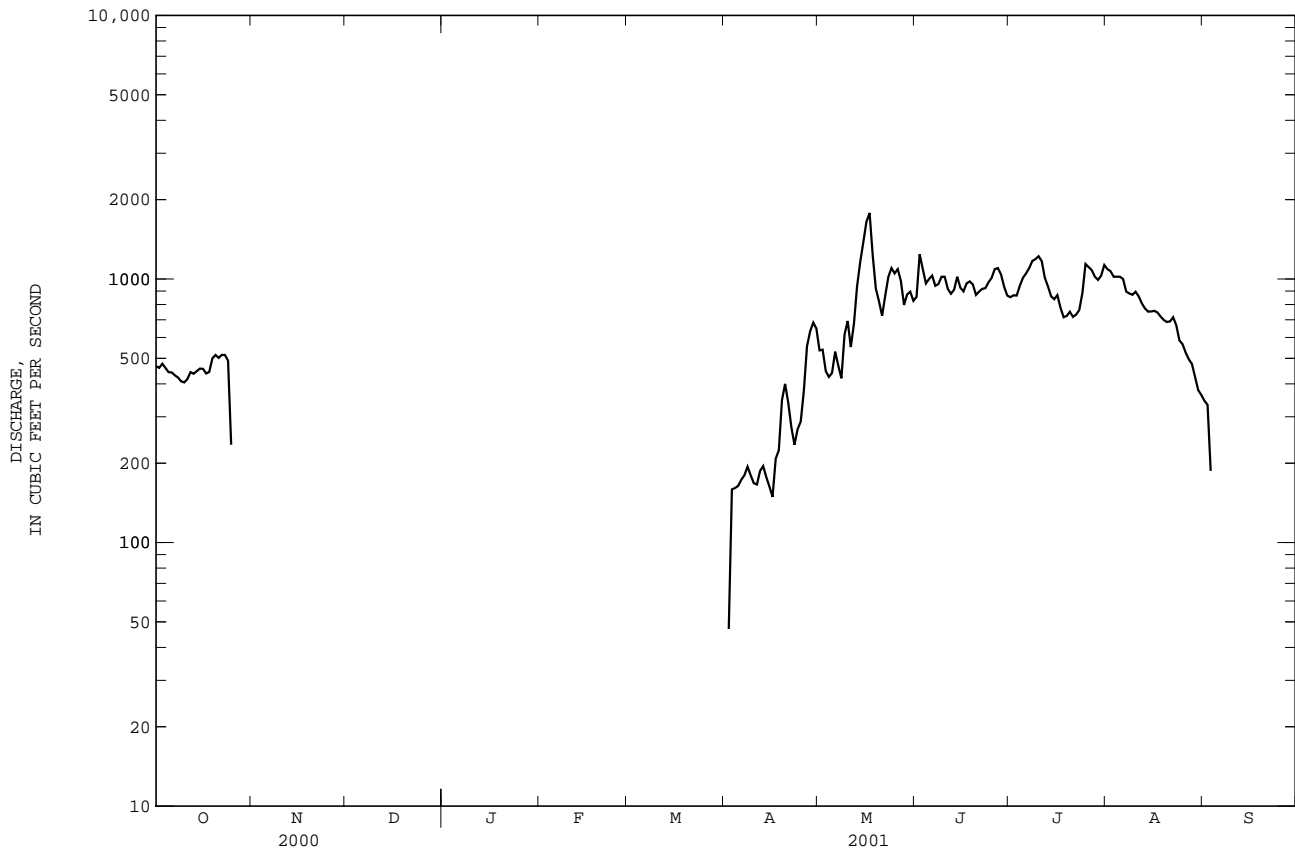
91

06226000 WYOMING CANAL NEAR LENORE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*		FOR 2001 WATER YEAR*		WATER YEARS 1941 - 2001*	
ANNUAL MEAN	--	--	--	--	540 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--	--	--	--	669 <sup>a</sup>	1972
LOWEST ANNUAL MEAN	--	--	--	--	461 <sup>a</sup>	1975
HIGHEST DAILY MEAN	1860	May 25	1910	May 16	1860	Jun 11,12 1990, May 25 2000
LOWEST DAILY MEAN	13	Mar 28	.00	Many days	.00	Many days, most years
MAXIMUM PEAK FLOW	--	--	1910	May 16	2060	Jun 5 1990
MAXIMUM PEAK STAGE	--	--	13.28	May 16	13.79	Jun 5 1990

\* For period of operation.

a Water years 1977, 1978, and 1988 to current year not included.



## YELLOWSTONE RIVER BASIN

06226100 WIND RIVER BELOW WYOMING CANAL DIVERSION, NR LENORE, WY

LOCATION.--Lat 43°13'19", long 108°57'00", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 24, T.3 N., R.2 W., Fremont County, Hydrologic Unit 10080005, about 0.5 mi downstream from diversion, 9 mi west of Morton, and 10 mi southeast of Willow Creek.

PERIOD OF RECORD.--July to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]

06226100 WIND RIVER BELOW WYOMING CANAL DIVERSION, NR LENORE, WY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 16...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)		
JUL 26...	--	--	--	--	--	--	--	--	--	11	12		
AUG 16...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	374	375		
SEP 19...	--	--	--	--	--	--	--	--	--	90	87		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNENAR, WY

LOCATION.--Lat 43°09'02", long 108°43'41", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.14, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, 450 ft downstream from headgate, 1.6 mi upstream from bridge on State Highway 132 and 2.5 mi west of Kinnear.

PERIOD OF RECORD.--May 1991 to September 1999, May to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,310 ft above sea level, from topographic map.

REMARKS.--Records good. Flow is diverted from the Wind River for irrigation. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	30	32	34	29
2	---	---	---	---	---	---	---	---	31	32	34	29
3	---	---	---	---	---	---	---	---	31	32	34	31
4	---	---	---	---	---	---	---	---	32	32	33	32
5	---	---	---	---	---	---	---	---	32	32	33	32
6	---	---	---	---	---	---	---	---	31	32	33	32
7	---	---	---	---	---	---	---	---	34	32	32	32
8	---	---	---	---	---	---	---	---	35	32	32	33
9	---	---	---	---	---	---	---	---	36	32	32	32
10	---	---	---	---	---	---	---	---	35	33	32	32
11	---	---	---	---	---	---	---	---	36	33	31	29
12	---	---	---	---	---	---	---	---	34	32	32	27
13	---	---	---	---	---	---	---	---	34	32	31	27
14	---	---	---	---	---	---	---	---	33	32	31	27
15	---	---	---	---	---	---	---	---	33	32	31	29
16	---	---	---	---	---	---	---	13	33	32	31	29
17	---	---	---	---	---	---	---	20	33	32	30	28
18	---	---	---	---	---	---	---	17	33	32	30	30
19	---	---	---	---	---	---	---	17	33	32	30	30
20	---	---	---	---	---	---	---	17	33	32	30	30
21	---	---	---	---	---	---	---	18	32	32	29	29
22	---	---	---	---	---	---	---	18	32	33	29	29
23	---	---	---	---	---	---	---	18	32	33	29	28
24	---	---	---	---	---	---	---	21	32	33	28	28
25	---	---	---	---	---	---	---	29	32	33	28	28
26	---	---	---	---	---	---	---	29	32	33	28	28
27	---	---	---	---	---	---	---	29	32	33	28	28
28	---	---	---	---	---	---	---	30	31	33	28	29
29	---	---	---	---	---	---	---	29	32	33	29	29
30	---	---	---	---	---	---	---	29	32	33	29	30
31	---	---	---	---	---	---	---	28	---	33	29	---
TOTAL	---	---	---	---	---	---	---	---	981	1004	950	886
MEAN	---	---	---	---	---	---	---	---	32.7	32.4	30.6	29.5
MAX	---	---	---	---	---	---	---	---	36	33	34	33
MIN	---	---	---	---	---	---	---	---	30	32	28	27
AC-FT	---	---	---	---	---	---	---	---	1950	1990	1880	1760

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)\*

MEAN	1.25	---	---	---	---	---	---	15.2	22.6	25.7	25.3	20.1
MAX	1.73	---	---	---	---	---	---	26.1	33.6	32.6	33.5	29.5
(WY)	1993	---	---	---	---	---	---	1994	1999	1999	1999	2001
MIN	.76	---	---	---	---	---	---	6.98	11.5	12.7	19.5	10.9
(WY)	1994	---	---	---	---	---	---	1999	1995	1992	1997	1993

06227596 JOHNSTOWN DITCH AT HEADWORKS, NEAR KINNEN, WY--Continued

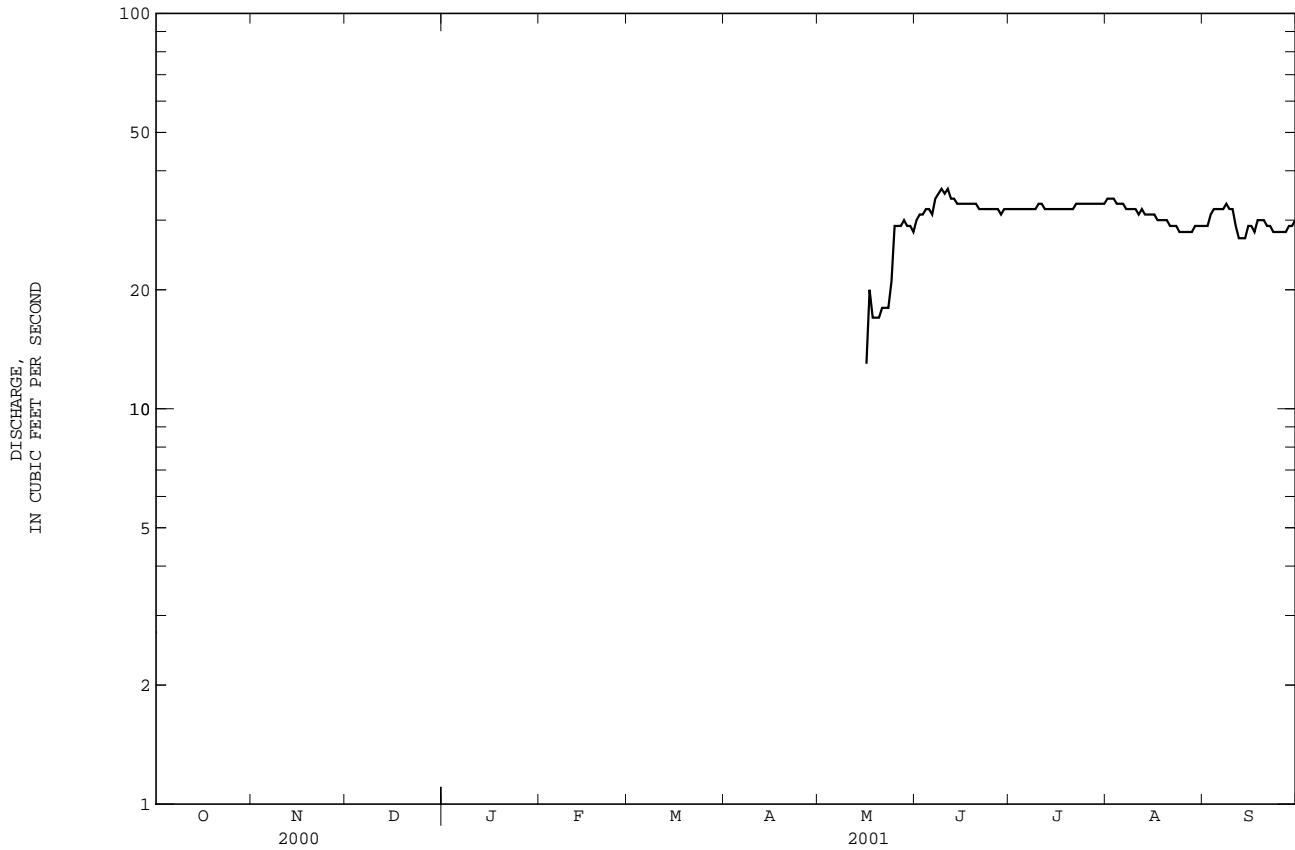
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1991 - 2001\*

HIGHEST DAILY MEAN  
LOWEST DAILY MEAN36 Jun 9  
.00 Many days48 Jun 25 1991  
.00 Many days,MAXIMUM PEAK FLOW  
MAXIMUM PEAK STAGE39 Sep 3  
1.78 Sep 356 Jul 23 1996  
2.25 Jul 23 1996

\* For period of operation.



## YELLOWSTONE RIVER BASIN

06227600 WIND RIVER NEAR KINNENAR, WY

LOCATION.--Lat 43°08'38", long 108°42'26", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.13, T.2 N., R.1 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank, downstream side of bridge on Wyoming State Secondary Highway 132, and 1.6 mi southwest of Kinnear.

DRAINAGE AREA.--2,194 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1974 to September 1979 (no winter records), April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above sea level, from topographic map. April 1974 to September 1979 and Mar. 28, 1991 to June 8, 1997, at site 300 ft upstream on right bank at same datum. June 9, 1997 to Apr. 21, 1998, at present site on right bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Bull Lake beginning in 1938 (see station 06224500) and Pilot-Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 102,100 acres lying both upstream and downstream from station. The Wyoming Canal of the Riverton Project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot Wasteway. Additional wastewater returns to river downstream from station through Fivemile and Muddy creeks. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	456	e280	e220	e230	e240	249	187	434	333	341	299
2	126	438	e280	e220	e240	e250	236	238	430	340	343	299
3	127	393	e280	e220	e250	e260	133	247	432	343	345	349
4	114	365	e280	e220	e250	e270	118	234	434	338	346	353
5	97	369	e280	e220	e250	e270	111	243	425	337	346	334
6	89	405	e270	e230	e250	e280	106	249	412	338	345	347
7	85	366	e260	e220	230	e280	100	253	413	341	342	358
8	84	343	e250	e220	210	e290	96	274	418	337	345	370
9	83	356	e230	e220	e200	e300	87	302	421	338	349	349
10	80	366	e210	e220	e200	e310	86	314	417	361	345	331
11	79	335	e195	e220	e210	e310	86	312	415	357	344	287
12	77	289	e190	e220	e220	e310	85	435	354	350	347	264
13	72	e230	e189	e220	e230	e300	82	483	361	345	345	258
14	72	e240	e195	e220	e230	e280	80	593	358	346	343	260
15	73	e240	e200	e220	e230	e270	79	650	347	357	345	301
16	69	e230	e210	e210	e230	e290	94	825	348	352	335	298
17	69	e230	e230	e200	e230	e310	94	707	352	346	327	292
18	69	e230	e240	e200	e230	e340	91	346	355	348	323	315
19	67	e240	e240	e200	e230	e360	85	373	353	347	323	314
20	67	e240	e240	e210	e240	e380	84	393	353	342	319	314
21	65	e250	e240	e200	e250	e340	85	410	352	339	308	310
22	71	e250	e230	e200	e250	305	86	441	348	352	300	294
23	65	e250	e220	e200	e250	293	e130	442	337	351	293	288
24	65	e250	e230	e200	e250	297	e185	456	331	354	297	282
25	209	e260	e240	e210	e250	314	e220	445	331	355	297	276
26	508	e270	e230	e200	e250	314	210	454	331	357	296	280
27	490	e270	e230	e200	e240	301	159	473	323	358	296	282
28	494	e280	e230	e200	e230	282	148	468	324	358	298	294
29	468	e280	e220	e200	---	268	147	454	329	343	292	302
30	460	e280	e220	e200	---	269	149	437	338	337	293	313
31	464	---	e220	e210	---	263	---	437	---	334	297	---
TOTAL	5081	9001	7259	6550	6560	9146	3701	12575	11176	10734	10065	9213
MEAN	164	300	234	211	234	295	123	406	373	346	325	307
MAX	508	456	280	230	250	380	249	825	434	361	349	370
MIN	65	230	189	200	200	240	79	187	323	333	292	258
AC-FT	10080	17850	14400	12990	13010	18140	7340	24940	22170	21290	19960	18270

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2001, BY WATER YEAR (WY)\*

	MEAN	378	442	319	294	301	329	266	1018	2769	1764	579	397
MAX	850	625	380	360	378	418	758	2356	6611	4802	1230	564	
(WY)	1998	1998	1996	1996	1998	1996	1974	1999	1999	1995	1976	1976	
MIN	164	300	234	193	224	194	72.9	346	373	346	325	216	
(WY)	2001	2001	2001	1993	1993	1992	1978	1995	2001	2001	2001	1977	



## YELLOWSTONE RIVER BASIN

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06227600 WIND RIVER NEAR KINNEAR, WY--Continued

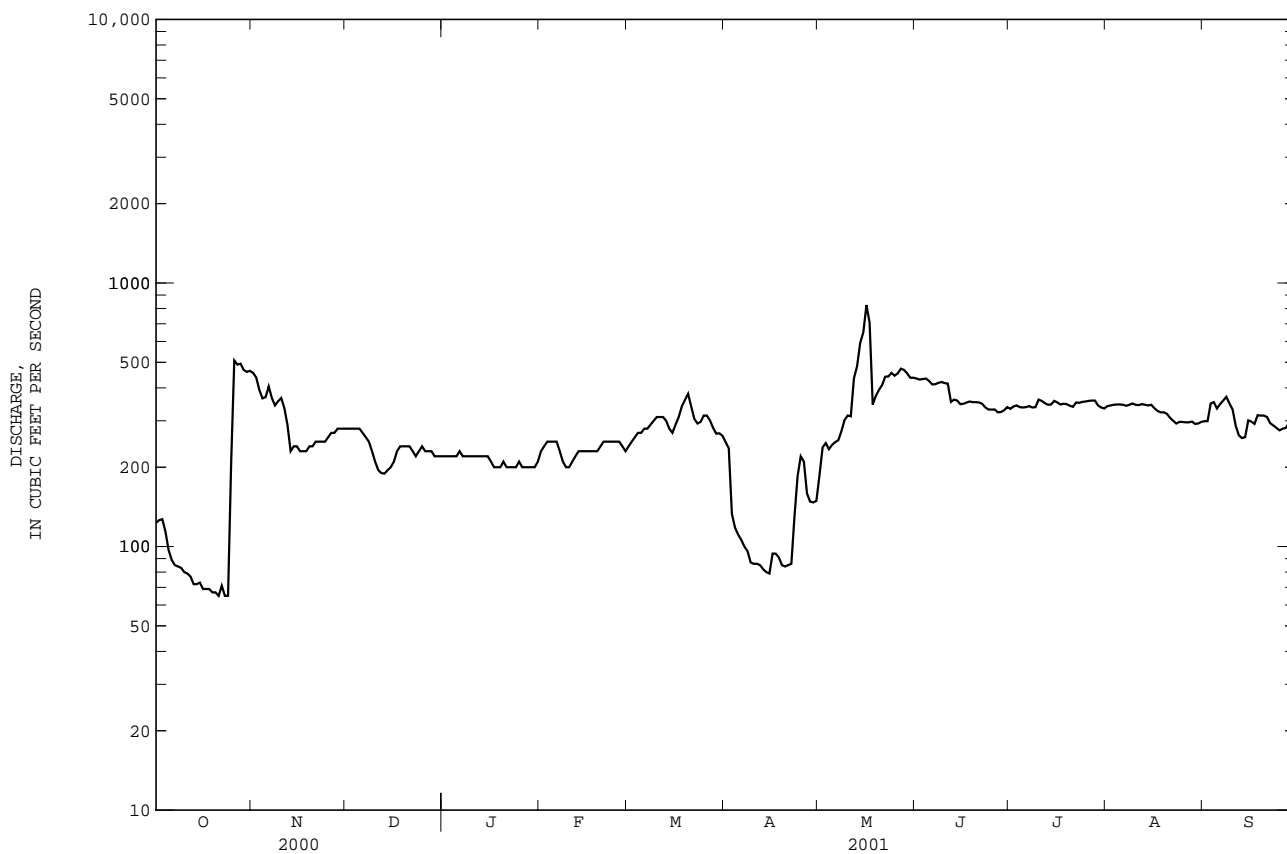
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1974 - 2001*	
ANNUAL TOTAL	141225		101061		--	
ANNUAL MEAN	386		277		725	
HIGHEST ANNUAL MEAN	--		--		1272	1999
LOWEST ANNUAL MEAN	--		--		277	2001
HIGHEST DAILY MEAN	2100	May 30	825	May 16	11100	Jun 20 1999
LOWEST DAILY MEAN	65	Oct 21	65	Oct 21	28	Apr 24 1978
ANNUAL SEVEN-DAY MINIMUM	67	Oct 18	67	Oct 18	35	Apr 19 1978
MAXIMUM PEAK FLOW	--		2620	May 15	13900 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--		5.41	May 15	8.79 <sup>b</sup>	Jun 10 1997
ANNUAL RUNOFF (AC-FT)	280100		200500		525200	
10 PERCENT EXCEEDS	478		407		1980	
50 PERCENT EXCEEDS	320		280		388	
90 PERCENT EXCEEDS	153		104		200	

\* For period of operation.

a Gage height, 8.03 ft, from floodmarks.

b From floodmarks, discharge, 11,600 ft<sup>3</sup>/s.

e Estimated.



06227600 WIND RIVER NEAR KINNEAR, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1985-92, July to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM TOTAL RECOV-ERABLE (MG/L) AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L) AS MG) (00927)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L) AS K) (00937)	SODIUM, TOTAL RECOV-ERABLE (MG/L) AS NA) (00929)
FEB 14...	1145	230	628	12.0	100	8.6	435	-6.0	.00	53.1	15.5	2.7	16.0
JUN 05...	1315	427	630	9.4	113	8.4	217	22.0	15.0	22.9	6.44	1.8	9.4
JUL 16...	1805	348	625	6.6	96	8.3	261	32.0	24.0	--	--	--	--
AUG 20...	1000	317	630	8.4	103	8.4	263	24.5	16.0	25.9	8.00	<.1	12.4
SEP 12...	1230	397	630	5.4	69	8.0	219	21.0	18.0	--	--	--	--
DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
FEB 14...	179	5.0	.3	16.4	53.4	273	.10	.053	.001	E.006	.029	E6k	E9k
JUN 05...	76	4.3	.2	8.6	28.4	126	.20	.006	<.001	.007	.033	E10k	E3k
JUL 16...	--	--	--	--	--	--	.33	.008	.001	<.007	.084	54	93
AUG 20...	87	4.2	.2	6.9	41.3	163	.20	<.005	<.001	<.007	.028	34	36
SEP 12...	--	--	--	--	--	--	.25	.006	.001	<.007	.020	E6k	E12k
DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM WATER UNFLTRD RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	CYANIDE TOTAL (MG/L AS CN) (00720)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
FEB 14...	E1	66.4	<13.0	M	<20.0	<.01	160	<1	13	<.14	<2.6	<.43	<31
JUN 05...	<2	34.3	<13.0	<1	<20.0	<.01	110	<1	13	.02	<3.0	<.40	<31
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<2	37.3	<13.0	<1	<20.0	<.01	340	<1	18	<.01	<3.0	<.40	<31
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLT REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLT 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLT 0.7 U GF, REC (UG/L) (82674)	CHLOR-ZINE, WATER, PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, REC (UG/L) (04041)	DCPA WATER FLT 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
FEB 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--

## YELLOWSTONE RIVER BASIN

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06227600 WIND RIVER NEAR KINNEAR, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DI-AZINON, DIS- SOLVED (UG/L) (39572)	DI-ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)
FEB 14...	--	--	--	--	--	--	--	--	--	--	--	--	<.02
JUN 05...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.02
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.02
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
FEB 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
JUL 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
SEP 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)		
FEB 14...	--	--	--	--	--	--	--	--	--	98	61		
JUN 05...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	E.006	18	21		
JUL 16...	--	--	--	--	--	--	--	--	--	135	127		
AUG 20...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	24	21		
SEP 12...	--	--	--	--	--	--	--	--	--	16	17		

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY

LOCATION.--Lat 43°01'34", long 108°31'12", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.33, T.1 N., R.3 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 0.6 mi downstream from headgates and 6.9 mi west of Riverton.

PERIOD OF RECORD.--May 1991 to September 1999, May to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,060 ft above sea level, from topographic map.

REMARKS.--Records fair. Flow is diverted from Wind River for irrigation. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	36	47	41	39
2	---	---	---	---	---	---	---	---	35	47	42	39
3	---	---	---	---	---	---	---	---	35	47	42	37
4	---	---	---	---	---	---	---	---	36	47	41	37
5	---	---	---	---	---	---	---	---	38	45	40	31
6	---	---	---	---	---	---	---	---	38	39	40	31
7	---	---	---	---	---	---	---	---	38	36	39	32
8	---	---	---	---	---	---	---	---	37	37	37	33
9	---	---	---	---	---	---	---	---	38	37	35	34
10	---	---	---	---	---	---	---	---	36	38	33	34
11	---	---	---	---	---	---	---	---	35	39	33	34
12	---	---	---	---	---	---	---	---	34	38	35	34
13	---	---	---	---	---	---	---	---	33	38	34	35
14	---	---	---	---	---	---	---	---	31	38	33	35
15	---	---	---	---	---	---	---	---	38	39	33	39
16	---	---	---	---	---	---	---	---	43	39	33	43
17	---	---	---	---	---	---	---	---	45	40	33	42
18	---	---	---	---	---	---	---	---	46	40	34	42
19	---	---	---	---	---	---	---	8.5	47	40	34	41
20	---	---	---	---	---	---	---	15	47	40	32	39
21	---	---	---	---	---	---	---	17	46	40	32	39
22	---	---	---	---	---	---	---	20	47	40	31	39
23	---	---	---	---	---	---	---	22	50	40	31	38
24	---	---	---	---	---	---	---	26	50	40	30	39
25	---	---	---	---	---	---	---	27	49	39	28	40
26	---	---	---	---	---	---	---	26	49	40	26	44
27	---	---	---	---	---	---	---	30	48	42	25	44
28	---	---	---	---	---	---	---	29	47	43	24	47
29	---	---	---	---	---	---	---	29	47	43	21	46
30	---	---	---	---	---	---	---	26	49	43	13	47
31	---	---	---	---	---	---	---	30	---	41	28	---
TOTAL	---	---	---	---	---	---	---	---	1248	1262	1013	1154
MEAN	---	---	---	---	---	---	---	---	41.6	40.7	32.7	38.5
MAX	---	---	---	---	---	---	---	---	50	47	42	47
MIN	---	---	---	---	---	---	---	---	31	36	13	31
AC-FT	---	---	---	---	---	---	---	---	2480	2500	2010	2290

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)\*

MEAN	---	---	---	---	---	---	.60	24.4	25.5	28.7	25.8	26.2
MAX	---	---	---	---	---	---	.60	35.3	41.6	44.6	47.7	42.9
(WY)	---	---	---	---	---	---	1992	1992	2001	1994	1994	1994
MIN	---	---	---	---	---	---	.60	20.2	12.8	19.4	8.74	10.3
(WY)	---	---	---	---	---	---	1992	1993	1995	1993	1998	1999

06227810 LEFTHAND DITCH AT HEADWORKS, NEAR RIVERTON, WY--Continued

## SUMMARY STATISTICS

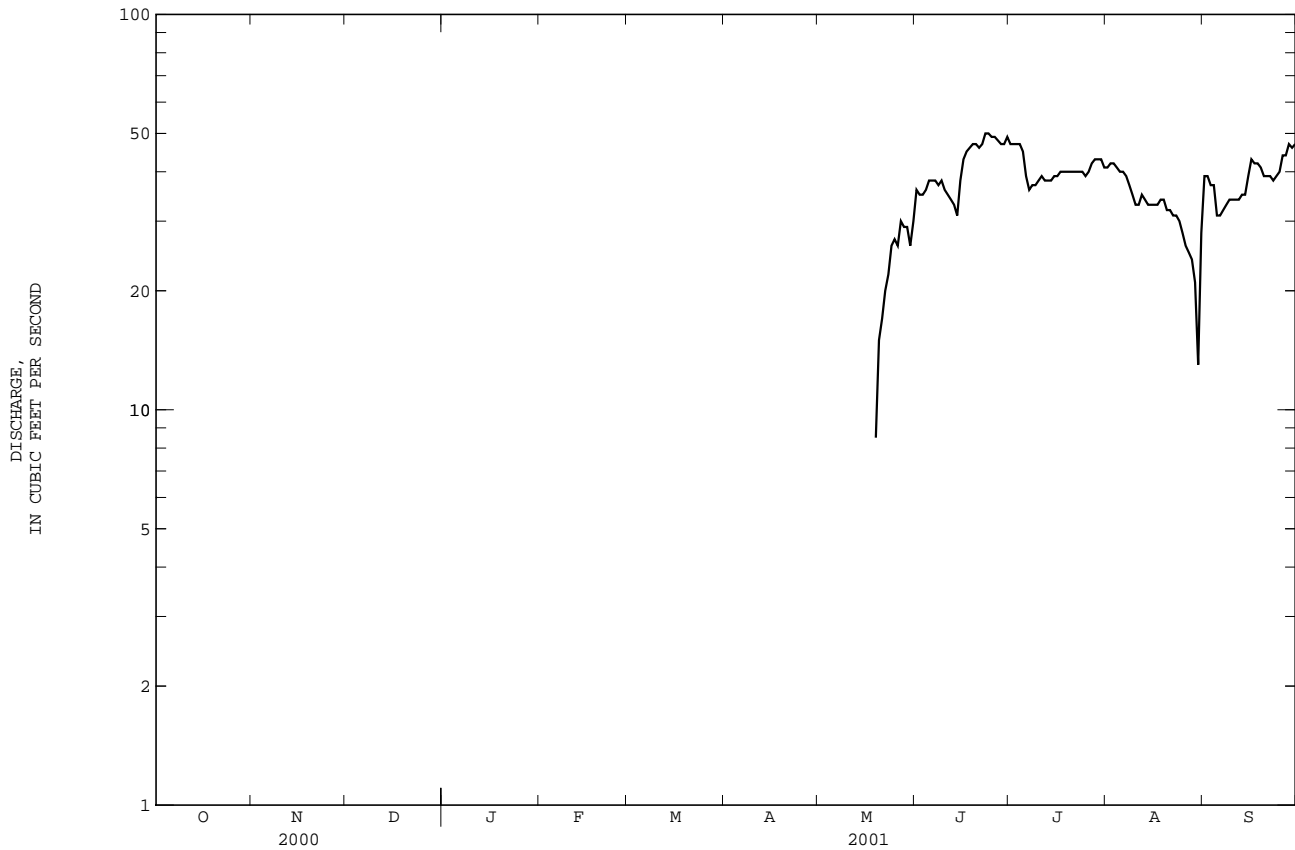
FOR 2001 WATER YEAR\*

WATER YEARS 1991 - 2001\*

HIGHEST DAILY MEAN	50	Jun 23,24	66	May 25, 30 1997
LOWEST DAILY MEAN	6.0	Oct 1	.00	Many days, most years
MAXIMUM PEAK FLOW	68	Aug 31	74 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	2.80	Aug 31	3.19	May 24 1997 Sep 8 1997

\* For period of operation.

a Gage height, 2.73 ft in 1991, 3.09 ft in 1997.



## YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY

LOCATION.--Lat 43°00'38", long 108°22'34", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.2, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080001, Wind River Indian Reservation, on left bank 20 ft downstream from bridge on State Highway 789, 1.1 mi southeast of post office in Riverton, and 1.5 mi upstream from Little Wind River.

DRAINAGE AREA.--2,309 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to August 1906, August to December 1907, May to October 1908, May 1911 to current year. Monthly discharge only for some periods, published in WSP 1309. Published as Big Wind River near Arapahoe Agency 1906 and as Big Wind River near Riverton 1907-08.

REVISED RECORDS.--WSP 1509: 1935. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.56 ft above sea level. See WSP 1729 for history of changes prior to Oct. 13, 1930. Oct. 13, 1930 to Apr. 15, 1968, water-stage recorder at site 280 ft upstream at datum 2.00 ft higher. Apr. 16 to Nov. 17, 1968, water-stage recorder at site 155 ft upstream at datum 2.00 ft higher. Nov. 18, 1968 to July 28, 1970, water-stage recorder at site 20 ft downstream at datum 2.00 ft higher. July 29, 1970 to Sept. 30, 1977, water-stage recorder at site 245 ft downstream at datum 2.00 ft higher. Oct. 1, 1977 to Oct. 23, 1997 at site 245 ft downstream at same datum.

REMARKS.--Records poor. Some regulation by Bull Lake beginning in 1938 (station 06224500) and Pilot Butte Reservoir beginning in 1926, combined capacity, 182,000 acre-ft. Diversions upstream from station for irrigation of about 128,000 acres upstream and downstream from station. The Wyoming Canal of the Riverton project is the major diversion. This diversion began in 1926 and part of it can be returned to the river upstream from station through Pilot wasteway. Additional wastewater returns to river downstream from station through Fivemile Creek and Muddy Creek. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	448	e260	e210	e260	e300	296	18	29	33	31	22
2	63	434	e260	e210	e270	e310	274	19	26	33	33	22
3	69	412	e240	e210	e270	e330	143	54	30	26	26	22
4	97	373	e250	e220	e270	e350	99	47	44	26	27	68
5	88	359	e240	e220	e280	e360	107	26	49	30	32	71
6	74	391	e230	e240	e280	e360	104	16	37	26	35	71
7	66	383	e240	e230	e260	e370	98	12	25	27	34	85
8	63	353	e230	e220	e250	e380	90	22	23	29	32	107
9	61	362	e210	e220	e240	e410	83	20	24	28	34	109
10	61	364	e190	e220	e250	e410	77	29	21	30	33	97
11	60	e320	e180	e230	e270	e410	76	22	21	58	37	84
12	54	e290	e180	e230	e270	e410	74	40	23	41	32	46
13	55	e280	e180	e230	e270	e390	72	85	41	33	32	31
14	90	e250	e170	e230	e270	e370	69	98	40	25	32	28
15	88	e240	e180	e230	e270	e350	67	240	29	28	24	36
16	88	e250	e200	e220	e280	e370	67	144	22	36	27	60
17	86	e250	e200	e210	e280	e400	49	483	26	30	24	57
18	87	e240	e190	e210	e280	e420	39	75	25	26	21	65
19	85	e230	e200	e220	e290	e440	34	19	27	28	22	90
20	84	e230	e200	e220	e300	e440	34	18	25	23	25	114
21	83	e230	e200	e220	e310	e430	27	24	24	27	27	188
22	96	e240	e180	e220	e330	e440	54	29	23	23	22	182
23	93	e240	e190	e220	e340	e420	48	33	23	21	17	169
24	85	e240	e200	e220	e340	e440	40	23	24	22	18	e170
25	86	e250	e210	e220	e340	e490	26	32	24	24	17	e175
26	406	e260	e210	e220	e340	555	16	25	26	26	18	e200
27	451	e260	e220	e220	e330	369	17	37	33	28	18	e205
28	460	e270	e230	e230	e320	329	23	41	27	28	18	e220
29	457	e270	e230	e240	---	319	21	49	24	27	20	e230
30	452	e270	e220	e240	---	314	19	41	26	30	19	e245
31	443	---	e210	e250	---	306	---	37	---	29	24	---
TOTAL	4612	8989	6530	6930	8060	11992	2243	1858	841	901	811	3269
MEAN	149	300	211	224	288	387	74.8	59.9	28.0	29.1	26.2	109
MAX	460	448	260	250	340	555	296	483	49	58	37	245
MIN	54	230	170	210	240	300	16	12	21	21	17	22
AC-FT	9150	17830	12950	13750	15990	23790	4450	3690	1670	1790	1610	6480

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2001, BY WATER YEAR (WY)

	MEAN	596	451	348	329	333	350	409	1215	2832	1729	675	479
MAX	1500	895	559	539	531	650	1234	4618	7194	5802	3052	1794	
(WY)	1952	1969	1972	1972	1948	1916	1943	1928	1921	1917	1930	1927	
MIN	149	222	200	151	196	74.9	53.8	59.9	28.0	20.3	26.2	35.7	
(WY)	2001	1941	1932	1938	1981	1981	1989	2001	2001	1994	2001	1988	

06228000 WIND RIVER AT RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1912 - 2001	
ANNUAL TOTAL	82489		57036		--	
ANNUAL MEAN	225		156		803	
HIGHEST ANNUAL MEAN	--		--		1626	
LOWEST ANNUAL MEAN	--		--		156	
HIGHEST DAILY MEAN	1590	May 26	555	Mar 26	11400	Jun 14 1935
LOWEST DAILY MEAN	19	Jul 9	12	May 7	9.8	May 28 1977
ANNUAL SEVEN-DAY MINIMUM	21	Jul 8	18	Aug 23	12	Jul 13 1977
MAXIMUM PEAK FLOW	--		925 <sup>a</sup>		13300 <sup>b</sup>	
MAXIMUM PEAK STAGE	--		7.01 <sup>c</sup>		10.86 <sup>d</sup>	
ANNUAL RUNOFF (AC-FT)	163600		113100	Dec 16	582000	Jun 10 1997
10 PERCENT EXCEEDS	383		360		2060	
50 PERCENT EXCEEDS	180		97		400	
90 PERCENT EXCEEDS	27		23		162	

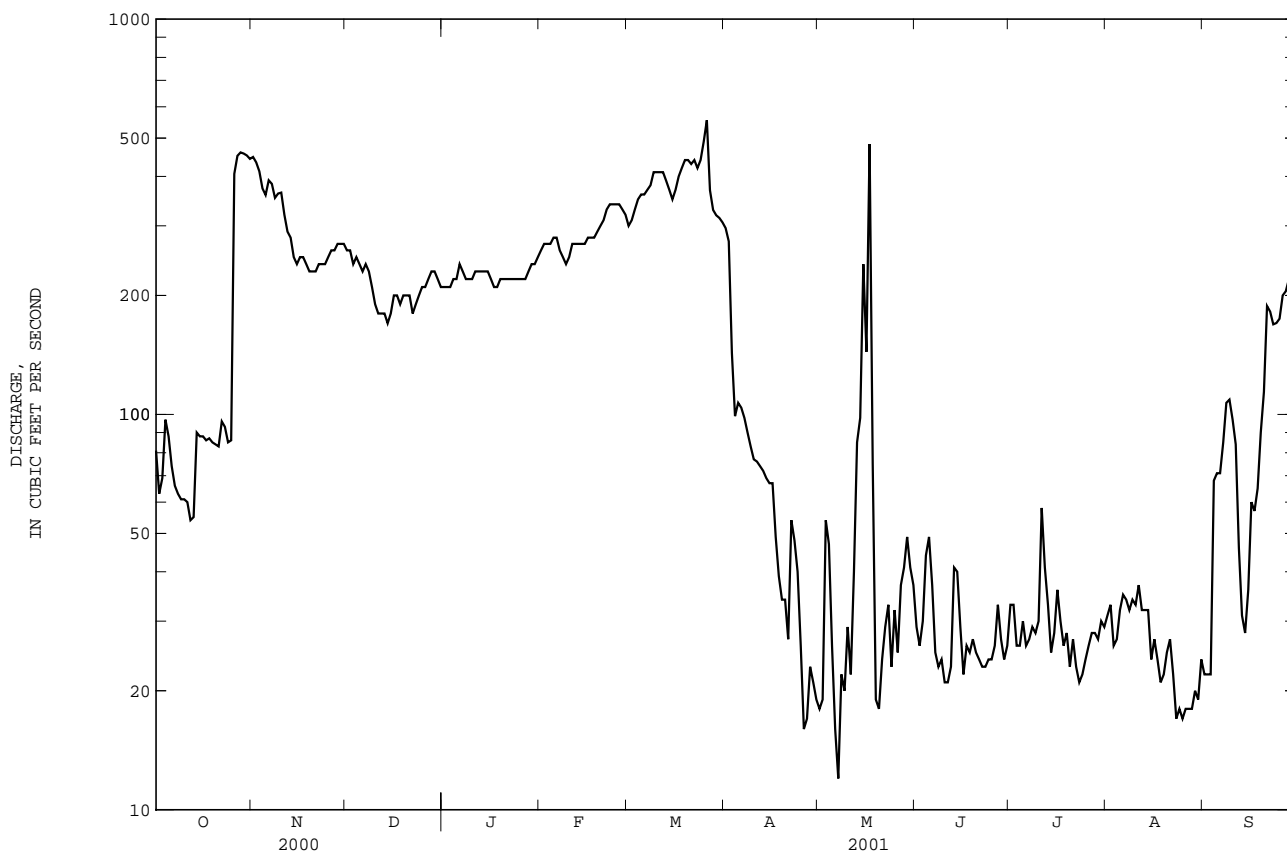
a Gage height, 4.50 ft.

b Gage height, 10.15 ft, site and datum then in use.

c Backwater from ice.

d Discharge, 10,100 ft<sup>3</sup>/s, site 245 ft downstream, present datum.

e Estimated.



## YELLOWSTONE RIVER BASIN

06228000 WIND RIVER AT RIVERTON, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-50, 1965-95, February to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	
FEB 15...	1410	266	635	9.4	77	8.1	464	-9.0	.00	54.9	15.5	2.7	19.9	
JUN 04...	1205	39	635	8.8	101	8.3	542	14.0	13.0	--	--	--	--	
JUL 18...	1140	26	640	11.0	151	8.7	559	31.0	22.0	--	--	--	--	
AUG 20...	1545	34	640	9.8	134	8.7	536	30.0	22.0	45.4	11.5	<.1	49.0	
SEP 18...	1055	59	640	9.7	113	8.1	599	23.0	14.5	--	--	--	--	

[illegible]

FEB	15...	185	4.9	.3	16.8	58.1	289	.13	.097	.002	E.004	.026	E4k	E4k
JUN	04...	--	--	--	--	--	--	--	--	--	--	--	E26k	E70k
JUL	18...	--	--	--	--	--	--	.45	.006	.002	.031	.058	E15k	22
AUG	20...	166	6.2	.4	11.5	107	349	.52	.005	.001	<.007	.025	E16k	43
SEP	18...	--	--	--	--	--	--	.52	.051	.004	<.007	.062	--	--

DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL	CADMIUM WATER	CHRO- MIUM, TOTAL	COPPER, TOTAL	CYANIDE	IRON, TOTAL	LEAD, TOTAL	MANGA- NESE, TOTAL	MERCURY TOTAL	SILVER, TOTAL	ZINC, TOTAL	
		RECOV- ERABLE	UNFLTRD	RECOV- ERABLE	RECOV- ERABLE		RECOV- ERABLE	RECOV- ERABLE	RECOV- ERABLE	SELE- NIUM,	RECOV- ERABLE	RECOV- ERABLE	
		ERABLE	ERABLE	ERABLE	ERABLE		ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	ERABLE	
		(UG/L	(UG/L	(UG/L	(UG/L		(UG/L	(MG/L	(UG/L	(UG/L	(UG/L	(UG/L	(UG/L
		AS BA)	AS CD)	AS CR)	AS CU)		AS CN)	AS FE)	AS PB)	AS MN)	AS HG)	AS SE)	AS AG)
	(01007)	(01027)	(01034)	(01042)	(00720)	(01045)	(01051)	(01055)	(71900)	(01147)	(01077)	(01092)	

[illegible]

	2,6-DI-ETHYL ANILINE	ACETO-CHLOR,	ALA-CHLOR,	ALPHA	ATRA-FLUR-	BEN-FLUR-ALIN	BUTYL-ATE,	CAR-BARYL	CARBO-FURAN		CYANA-ZINE,	DCPA	ATRA-ALIN
	WAT FLT	WATER,	WATER,	BHC	WATER,	WAT FLD	WATER,	FLTRD	FLTRD	CHLOR-PYRIFOS	WATER,	FLTRD	WATER,
	0.7 U	FLTRD	DISS,	DIS-	DISS,	0.7 U	DISS,	0.7 U	0.7 U	DIS-	DISS,	0.7 U	DISS,
DATE	GF, REC	REC	REC,	SOLVED	REC	GF, REC	REC	GF, REC	GF, REC	SOLVED	REC	GF, REC	REC
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(82666)	(49260)	(46342)	(34253)	(39632)	(82673)	(04028)	(82680)	(82674)	(38933)	(04041)	(82682)	(04040)

[illegible]



06228000 WIND RIVER AT RIVERTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	
	FEB 15...	--	--	--	--	--	--	--	--	--	--	--	<.02	
	JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
	JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.03	
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--	
DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	
	FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--	
	JUN 04...	--	--	--	--	--	--	--	--	--	--	--	--	
	JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	
AUG 20...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	.015	<.004	<.010	
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--	
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)			
	FEB 15...	--	--	--	--	--	--	--	--	55	40			
	JUN 04...	--	--	--	--	--	--	--	--	9	.95			
	JUL 18...	--	--	--	--	--	--	--	--	5	.35			
AUG 20...	<.011	<.023	<.011	E.032	<.034	<.017	<.005	<.002	<.009	12	1.1			
SEP 18...	--	--	--	--	--	--	--	--	--	74	12			

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°58'06", long 109°02'13", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.18, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.9 mi upstream from Washakie Dam and 8.0 mi southwest of Fort Washakie.

DRAINAGE AREA.--90.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,440 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	29	18	17	9.8	13	14	107	290	138	33	23
2	35	18	17	17	9.5	12	15	79	309	126	32	22
3	33	20	17	16	9.7	12	14	49	389	119	31	20
4	32	25	18	16	9.7	12	16	65	284	113	31	20
5	30	26	17	16	10	12	17	71	204	110	31	19
6	29	23	17	16	10	12	19	83	161	108	30	22
7	28	24	17	15	10	12	19	65	141	111	31	24
8	26	23	18	14	e9.0	12	19	73	151	110	32	27
9	27	25	17	14	e10	12	17	121	178	108	33	27
10	27	21	17	14	e10	12	17	167	224	120	37	25
11	30	17	18	14	11	12	19	174	240	116	36	23
12	33	21	18	14	10	11	18	217	243	107	34	21
13	34	20	19	14	10	12	16	312	252	95	33	20
14	37	e20	18	14	10	12	17	467	192	86	33	21
15	34	e20	18	14	11	11	16	517	151	81	34	24
16	34	e20	18	14	12	12	18	792	121	83	38	21
17	33	e20	18	14	12	11	18	519	111	76	36	20
18	33	e19	19	14	12	11	23	342	115	69	34	23
19	32	e19	18	13	12	11	31	281	116	65	31	24
20	30	e18	19	13	12	13	29	303	116	60	29	23
21	30	18	19	13	12	14	24	230	120	55	33	20
22	32	18	19	13	12	14	23	192	126	52	33	19
23	31	18	19	13	13	14	22	212	e137	50	31	18
24	35	18	20	13	13	14	25	263	e165	49	30	17
25	34	18	20	12	13	14	30	308	e185	46	29	16
26	32	18	20	12	13	15	43	370	e190	45	27	16
27	31	18	20	12	13	14	60	436	194	45	26	15
28	30	18	20	11	13	13	88	434	187	42	25	14
29	29	18	19	11	---	14	114	351	174	40	24	13
30	29	18	18	11	---	13	101	314	155	36	24	13
31	30	---	18	10	---	13	---	296	---	34	24	---
TOTAL	977	608	568	424	311.7	389	902	8210	5621	2495	965	610
MEAN	31.5	20.3	18.3	13.7	11.1	12.5	30.1	265	187	80.5	31.1	20.3
MAX	37	29	20	17	13	15	114	792	389	138	38	27
MIN	26	17	17	10	9.0	11	14	49	111	34	24	13
AC-FT	1940	1210	1130	841	618	772	1790	16280	11150	4950	1910	1210

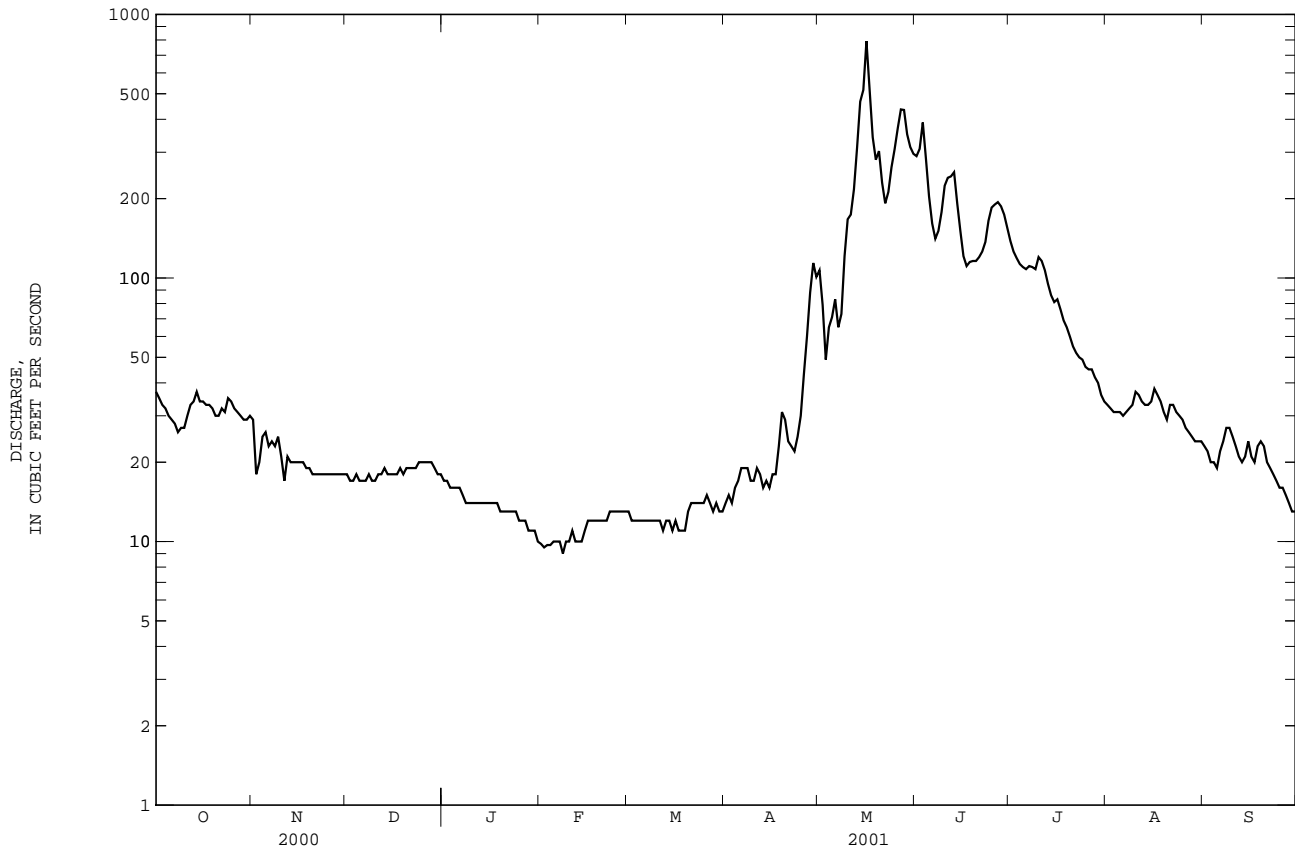
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2001, BY WATER YEAR (WY)

	MEAN	42.9	29.2	23.2	17.3	14.8	17.7	49.0	259	582	330	109	56.7
MAX	94.3	48.4	34.6	30.9	26.1	34.1	94.6	403	1067	791	197	96.2	
(WY)	1983	1991	1996	1997	1986	1986	1987	1987	1986	1995	1982	1997	
MIN	14.5	15.7	11.8	6.05	6.72	9.60	29.2	111	187	80.5	30.7	20.0	
(WY)	1989	1989	1977	1977	1977	1977	1982	1995	2001	2001	1988	1988	

06228350 SOUTH FORK LITTLE WIND RIVER ABOVE WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1977 - 2001	
ANNUAL TOTAL	37279		22080.7		--	
ANNUAL MEAN	102		60.5		128	
HIGHEST ANNUAL MEAN	--		--		188	1986
LOWEST ANNUAL MEAN	--		--		60.5	2001
HIGHEST DAILY MEAN	855	May 29	792	May 16	1960	Jun 13 1991
LOWEST DAILY MEAN	13	Jan 6, 7	9.0	Feb 8	4.5	Feb 1 1977
ANNUAL SEVEN-DAY MINIMUM	14	Jan 4	9.7	Feb 2	4.5	Feb 1 1977
MAXIMUM PEAK FLOW	--		962	May 16	2230	Jun 13 1991
MAXIMUM PEAK STAGE	--		6.19	May 16	8.48	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	73940		43800		92610	
10 PERCENT EXCEEDS	300		174		379	
50 PERCENT EXCEEDS	33		23		38	
90 PERCENT EXCEEDS	18		12		14	

e Estimated.



## YELLOWSTONE RIVER BASIN

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°59'04", long 108°59'57", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.9, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 0.7 mi downstream from Washakie Reservoir, 2.3 mi upstream from Timmoco Creek, and 6.2 mi west of Fort Washakie.

DRAINAGE AREA.--93.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above sea level, from topographic map.

REMARKS.--Records good. Flow regulated by Washakie Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	32	22	19	e10	e13	12	12	311	263	34	22
2	47	32	22	e19	9.6	e12	11	12	311	259	33	22
3	45	32	22	19	9.6	e12	11	13	320	254	32	22
4	37	31	21	18	9.9	e13	11	13	318	250	31	22
5	42	31	21	18	9.8	e13	11	13	302	245	31	22
6	35	31	21	e17	9.7	e13	11	13	285	240	31	22
7	35	31	20	e16	9.8	e13	11	14	282	235	32	18
8	35	31	20	e15	9.8	e13	11	14	253	230	38	16
9	35	30	20	e14	10	e13	11	14	217	225	23	16
10	35	30	20	13	10	e13	11	14	217	220	25	37
11	34	30	20	e13	10	e12	11	46	217	179	26	15
12	34	30	20	e13	10	e12	11	82	218	124	26	15
13	34	29	20	13	10	13	11	84	219	103	26	15
14	34	49	20	e13	10	13	11	84	227	93	26	16
15	34	32	22	e13	11	12	11	169	241	85	27	15
16	34	29	22	e13	e11	11	11	180	239	81	27	15
17	34	25	22	e13	e12	12	11	189	237	81	27	15
18	34	25	22	e13	e13	12	11	192	253	77	26	15
19	34	24	21	e13	11	13	11	194	281	72	25	15
20	34	24	21	12	11	13	11	197	288	68	25	15
21	34	24	21	e12	12	14	11	199	288	59	25	15
22	34	24	21	e12	e12	13	10	199	285	53	25	15
23	38	24	21	12	e13	12	10	199	282	49	25	16
24	55	23	21	e11	e13	12	11	200	279	49	25	16
25	32	23	20	e11	e13	12	11	202	278	49	24	15
26	32	23	20	11	e13	12	11	204	276	49	23	15
27	32	23	20	e11	e14	12	11	208	274	46	22	14
28	32	23	20	11	e13	13	10	211	272	41	22	12
29	32	23	20	e11	---	13	11	276	269	41	22	12
30	32	22	20	e10	---	13	11	311	266	39	22	12
31	32	---	20	e10	---	13	---	311	---	37	22	---
TOTAL	1107	840	643	419	310.2	390	328	4069	8005	3896	828	512
MEAN	35.7	28.0	20.7	13.5	11.1	12.6	10.9	131	267	126	26.7	17.1
MAX	55	49	22	19	14	14	12	311	320	263	38	37
MIN	32	22	20	10	9.6	11	10	12	217	37	22	12
AC-FT	2200	1670	1280	831	615	774	651	8070	15880	7730	1640	1020

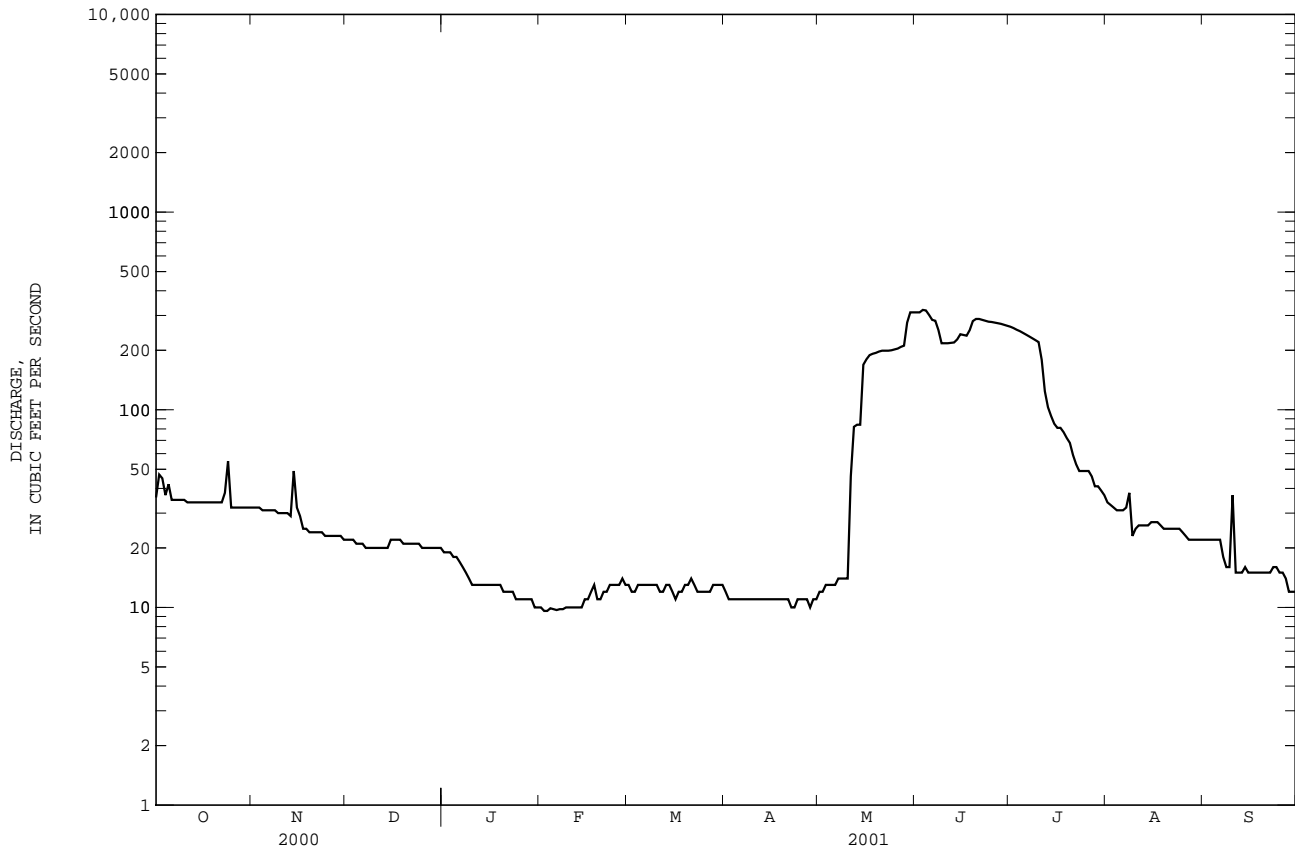
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

	MEAN	40.5	29.1	24.4	19.6	15.8	15.3	30.6	198	536	348	152	86.5
MAX	81.9	46.0	36.7	34.5	29.0	21.8	71.4	298	897	774	264	146	
(WY)	1999	1998	1991	1997	1997	1994	1994	1999	1991	1995	1993	1993	
MIN	18.8	4.68	5.19	6.18	7.19	6.65	5.07	125	244	126	26.7	17.1	
(WY)	1989	1989	1989	1989	1989	1991	1991	1990	1992	2001	2001	2001	

06228450 SOUTH FORK LITTLE WIND RIVER BELOW WASHAKIE RESERVOIR, NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1989 - 2001	
ANNUAL TOTAL	35495.6		21347.2		--	
ANNUAL MEAN	97.0		58.5		125	
HIGHEST ANNUAL MEAN	--		--		189	
LOWEST ANNUAL MEAN	--		--		58.5	
HIGHEST DAILY MEAN	969	Jun 2	320	Jun 3	1930	Jun 13 1991
LOWEST DAILY MEAN	5.1	Apr 17	9.6	Feb 2	3.5	Mar 17 1991
ANNUAL SEVEN-DAY MINIMUM	5.7	Apr 16	9.7	Feb 2	3.6	Mar 16 1991
MAXIMUM PEAK FLOW	--		438	Nov 14	2120	Jun 13 1991
MAXIMUM PEAK STAGE	--		3.50	Nov 14	6.43	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	70410		42340		90530	
10 PERCENT EXCEEDS	302		226		331	
50 PERCENT EXCEEDS	32		22		35	
90 PERCENT EXCEEDS	13		11		11	

e Estimated.



## YELLOWSTONE RIVER BASIN

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°00'02", long 108°55'56", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.6, T.1 S., R.1 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 160 ft downstream from headgate, 300 ft upstream from culvert on County Road 43, 2.0 mi upstream from Crooked Creek, and 2.4 mi west of Fort Washakie.

PERIOD OF RECORD.--April 1989 to September 1999, April to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,710 ft above sea level, from topographic map.

REMARKS.--Records good. Flow is diverted from the South Fork Little Wind River for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.85	11	279	278	50	28
2	---	---	---	---	---	---	e7.0	e14	281	276	47	27
3	---	---	---	---	---	---	e13	e13	283	273	43	27
4	---	---	---	---	---	---	e13	e14	279	268	40	27
5	---	---	---	---	---	---	13	e14	274	262	39	27
6	---	---	---	---	---	---	12	e14	266	258	38	25
7	---	---	---	---	---	---	13	e13	266	253	38	24
8	---	---	---	---	---	---	13	e19	256	250	45	20
9	---	---	---	---	---	---	12	e18	229	246	36	20
10	---	---	---	---	---	---	13	e19	228	238	38	30
11	---	---	---	---	---	---	12	e19	229	210	41	20
12	---	---	---	---	---	---	13	42	231	157	41	20
13	---	---	---	---	---	---	14	85	234	130	41	20
14	---	---	---	---	---	---	15	85	239	122	42	22
15	---	---	---	---	---	---	15	157	250	115	43	21
16	---	---	---	---	---	---	14	165	247	109	44	21
17	---	---	---	---	---	---	15	173	245	107	43	21
18	---	---	---	---	---	---	13	198	254	104	42	21
19	---	---	---	---	---	---	13	211	271	97	41	20
20	---	---	---	---	---	---	13	213	286	94	40	20
21	---	---	---	---	---	---	13	210	292	84	40	20
22	---	---	---	---	---	---	13	214	290	80	39	21
23	---	---	---	---	---	---	12	212	288	73	36	20
24	---	---	---	---	---	---	12	211	286	71	35	20
25	---	---	---	---	---	---	12	213	288	69	35	20
26	---	---	---	---	---	---	12	217	289	68	33	17
27	---	---	---	---	---	---	12	223	287	68	31	18
28	---	---	---	---	---	---	12	229	285	63	30	15
29	---	---	---	---	---	---	12	255	284	62	28	15
30	---	---	---	---	---	---	11	275	282	58	28	15
31	---	---	---	---	---	---	---	274	---	53	28	---
TOTAL	---	---	---	---	---	---	367.85	4030	7998	4596	1195	642
MEAN	---	---	---	---	---	---	12.3	130	267	148	38.5	21.4
MAX	---	---	---	---	---	---	15	275	292	278	50	30
MIN	---	---	---	---	---	---	.85	11	228	53	28	15
AC-FT	---	---	---	---	---	---	730	7990	15860	9120	2370	1270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)\*

MEAN	33.4	21.6	---	---	---	---	18.2	112	202	226	163	101
MAX	73.2	28.9	---	---	---	---	47.5	199	320	287	241	167
(WY)	1998	1995	---	---	---	---	1989	1992	1990	1996	1995	1997
MIN	.81	14.2	---	---	---	---	.97	21.3	29.5	100	38.5	21.4
(WY)	1994	1993	---	---	---	---	1992	1991	1995	1992	2001	2001

06228510 RAY CANAL AT HEADWORKS, NEAR FORT WASHAKIE, WY--Continued

## SUMMARY STATISTICS

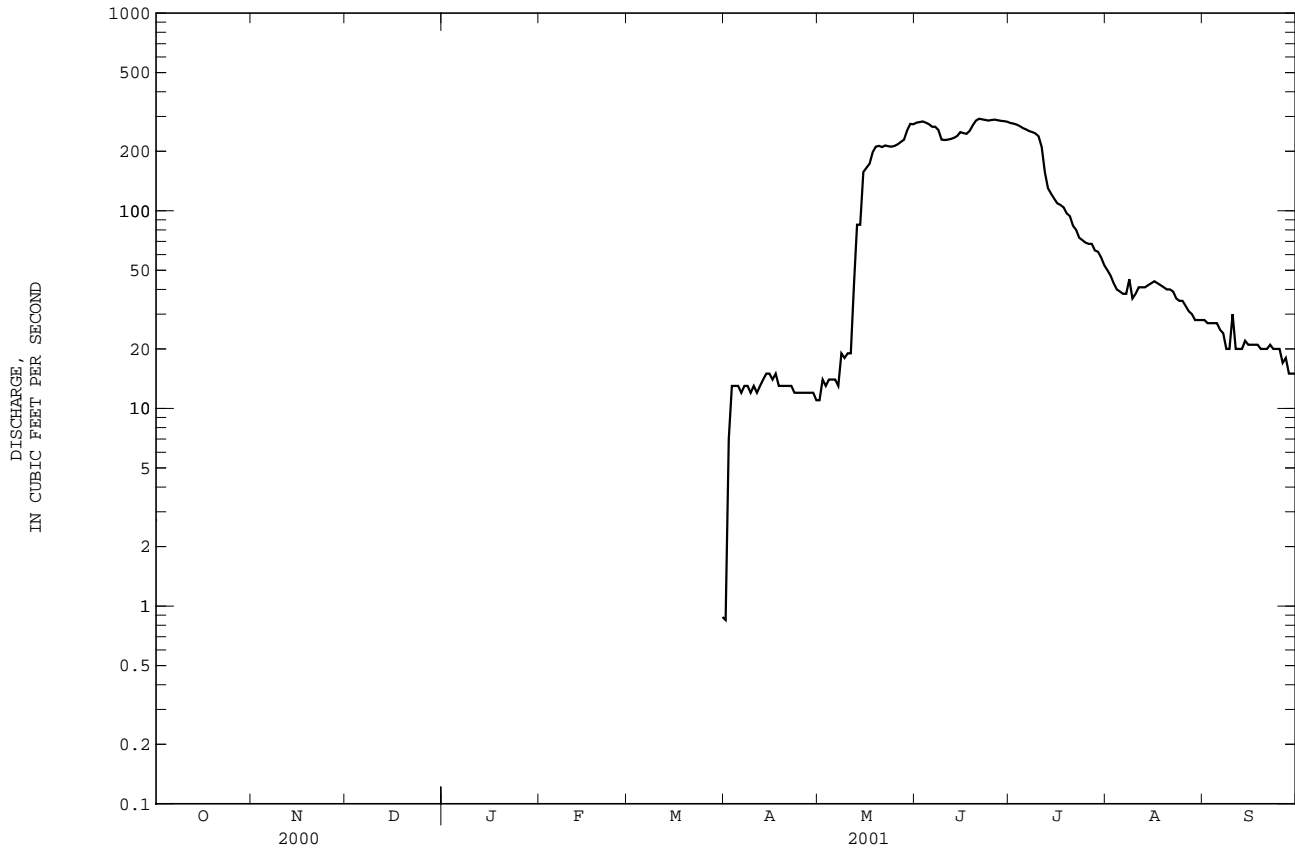
FOR 2001 WATER YEAR\*

WATER YEARS 1989 - 2001\*

HIGHEST DAILY MEAN	292	Jun 21	390	Jun 29 1996
LOWEST DAILY MEAN	.85	Apr 1	.00	Apr 1 1991
MAXIMUM PEAK FLOW	303	Jun 3	446	Jun 12 1996
MAXIMUM PEAK STAGE	3.68	Jun 3	4.11	Jun 24 1999

\* For period of operation.

e Estimated.



06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY

LOCATION.--Lat 43°01'43", long 109°00'02", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.28, T.1 N., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on left bank 0.2 mi upstream from North Fork Diversion Canal and 5.9 mi northeast of Fort Washakie.

DRAINAGE AREA.--112 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above sea level, from topographic map. Prior to Oct. 21, 1993, at site 2,000 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of 80 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	30	e15	e14	e10	e10	16	96	299	136	40	31
2	39	26	e14	e14	e10	e10	17	88	292	127	37	29
3	37	23	e14	e13	e10	e9.8	17	81	298	119	35	28
4	35	26	e14	e12	e10	e10	18	78	295	112	34	27
5	32	26	e14	e12	e10	e10	20	84	266	109	33	26
6	31	22	e14	e12	e10	e10	22	92	230	107	32	27
7	29	23	e14	e12	e10	e10	21	82	194	104	32	27
8	28	e23	e14	e12	e9.4	e11	20	83	168	102	32	28
9	29	e22	e14	e12	e9.0	e10	19	102	155	107	35	28
10	28	e22	e14	e12	e9.2	e10	19	132	152	112	38	27
11	27	e20	e14	e12	e9.4	e9.8	19	141	160	113	38	26
12	28	e18	e14	e12	e9.7	e9.5	20	173	178	122	40	26
13	29	e17	e15	e12	e10	e10	20	262	207	113	41	26
14	29	e16	e15	e12	e9.7	e10	20	417	217	107	43	26
15	29	e16	e14	e12	e9.4	e10	19	530	203	105	46	26
16	30	e16	e14	e12	e9.7	e10	20	762	175	106	52	25
17	30	e17	e15	e11	e10	e10	21	726	151	102	49	25
18	30	e17	e16	e10	e10	11	24	553	134	98	48	26
19	28	e16	e16	e11	e10	12	30	437	121	94	46	25
20	28	e16	e16	e11	e10	13	31	382	115	89	44	24
21	28	e16	e16	e11	e10	14	28	308	111	84	45	23
22	30	e15	e16	e11	e10	15	27	247	109	81	42	23
23	30	e14	e16	e11	e10	15	27	221	109	76	40	22
24	32	e14	e16	e11	e10	21	30	225	114	73	38	21
25	33	e14	e16	e10	e10	24	33	245	122	69	37	20
26	32	e14	e16	e10	e10	23	40	271	133	66	35	20
27	30	e14	e16	e10	e10	20	50	312	144	62	34	19
28	30	e15	e16	e10	e10	18	63	359	148	58	33	18
29	30	e14	e15	e10	---	18	75	378	146	54	32	18
30	29	e14	e14	e10	---	16	80	348	143	49	31	17
31	31	---	e14	e10	---	16	---	317	---	44	31	---
TOTAL	953	556	461	354	275.5	406.1	866	8532	5289	2900	1193	734
MEAN	30.7	18.5	14.9	11.4	9.84	13.1	28.9	275	176	93.5	38.5	24.5
MAX	42	30	16	14	10	24	80	762	299	136	52	31
MIN	27	14	14	10	9.0	9.5	16	78	109	44	31	17
AC-FT	1890	1100	914	702	546	805	1720	16920	10490	5750	2370	1460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

MEAN	50.4	34.6	25.5	19.9	18.4	26.0	53.3	282	625	337	125	66.8
MAX	76.1	57.3	50.1	31.9	29.5	38.8	84.5	420	1091	758	227	118
(WY)	1999	1999	1996	1996	1999	1995	1994	2000	1999	1995	1997	1997
MIN	13.5	14.7	13.6	8.95	8.52	13.1	27.5	143	176	74.9	38.5	24.5
(WY)	1989	1989	1989	1989	1989	2001	1993	1990	2001	1994	2001	2001

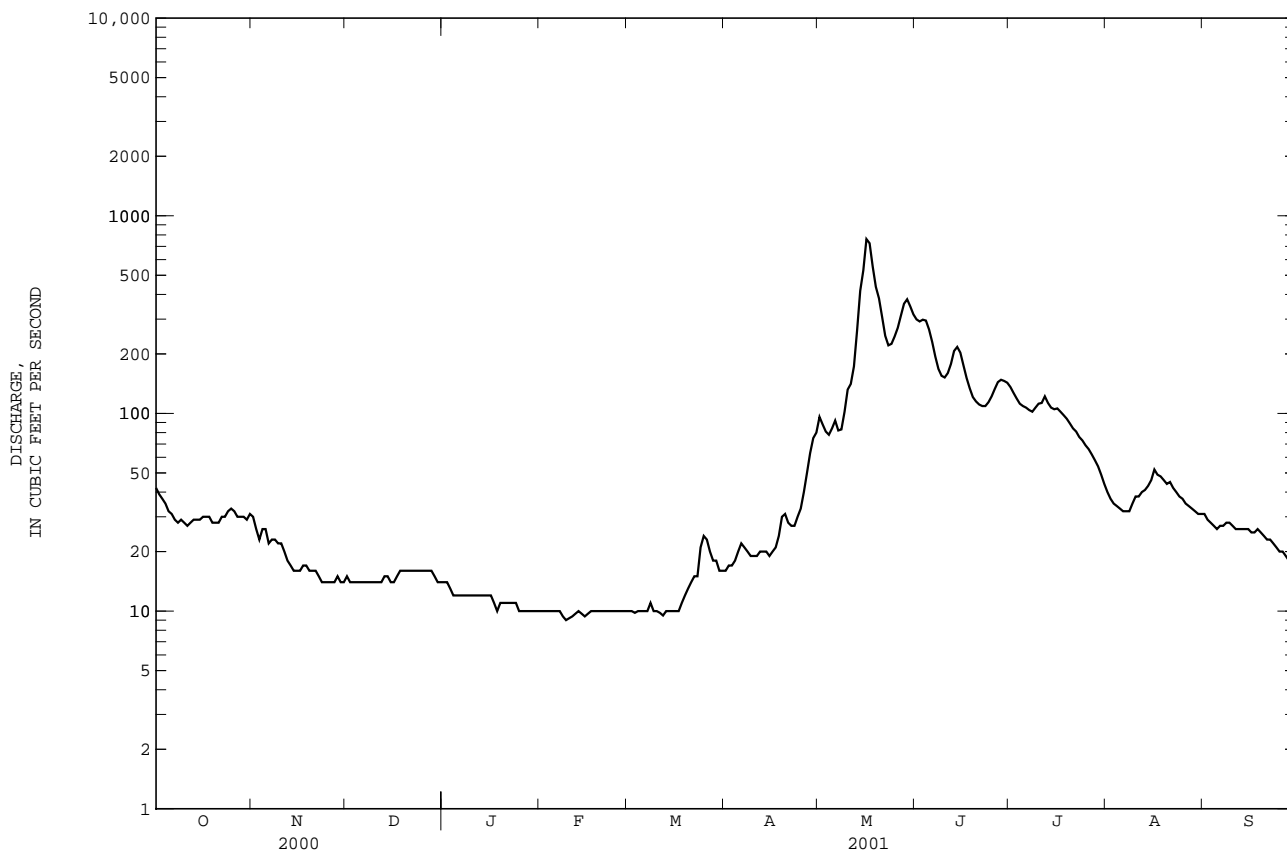


06228800 NORTH FORK LITTLE WIND RIVER NEAR FORT WASHAKIE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1989 - 2001	
ANNUAL TOTAL	39159		22519.6		--	
ANNUAL MEAN	107		61.7		139	
HIGHEST ANNUAL MEAN	--		--		208	1999
LOWEST ANNUAL MEAN	--		--		61.7	2001
HIGHEST DAILY MEAN	898	May 25	762	May 16	2070	Jun 13 1991
LOWEST DAILY MEAN	14	Nov 23	9.0	Feb 9	6.5	Feb 3 1989
ANNUAL SEVEN-DAY MINIMUM	14	Dec 2	9.5	Feb 8	7.4	Feb 2 1989
MAXIMUM PEAK FLOW	--		850	May 16	2360 <sup>a</sup>	Jun 13 1991
MAXIMUM PEAK STAGE	--		5.85	May 16	7.19	Jun 17 1999
ANNUAL RUNOFF (AC-FT)	77670		44670		100700	
10 PERCENT EXCEEDS	315		151		389	
50 PERCENT EXCEEDS	33		26		45	
90 PERCENT EXCEEDS	16		10		16	

a Gage height, 6.20 ft, site and datum then in use.

e Estimated.



## YELLOWSTONE RIVER BASIN

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY

LOCATION.--Lat 42°57'04", long 108°56'54", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.25, T.1 S., R.2 W., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, 50 ft upstream of Blue Trail Crossing, and 5.0 miles southwest of Fort Washakie.

DRAINAGE AREA.--16.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum, water years 1961-68, 1970-84. May 1990 to September 1999, April to September 2001 (no winter records since 1997).

GAGE.--Water-stage recorder. Elevation of gage is 5,935 ft above sea level, from topographic map. Oct. 1, 1961 to Sept. 30, 1968, crest-stage gage at site 100 ft downstream at datum 1.05 ft lower. Oct. 1, 1969 to Sept. 30, 1984, crest-stage gage at present site at datum 1.05 ft lower.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.6	6.6	5.3	4.3	3.9	3.6
2	---	---	---	---	---	---	4.7	6.4	5.2	4.3	3.8	3.6
3	---	---	---	---	---	---	4.7	6.3	5.3	4.4	3.8	3.6
4	---	---	---	---	---	---	4.7	6.1	5.4	4.3	3.8	3.7
5	---	---	---	---	---	---	4.8	6.0	5.3	4.3	3.7	3.7
6	---	---	---	---	---	---	4.9	6.2	5.1	4.2	3.7	3.8
7	---	---	---	---	---	---	4.9	6.1	5.0	4.3	3.8	3.8
8	---	---	---	---	---	---	4.8	6.0	5.0	4.3	3.8	3.9
9	---	---	---	---	---	---	4.8	6.4	5.1	4.4	3.9	3.8
10	---	---	---	---	---	---	4.9	6.8	5.0	4.5	3.9	3.8
11	---	---	---	---	---	---	4.9	6.7	5.0	4.6	3.9	3.8
12	---	---	---	---	---	---	4.9	6.5	5.0	4.5	3.9	3.9
13	---	---	---	---	---	---	4.9	6.6	4.9	4.4	3.9	3.9
14	---	---	---	---	---	---	4.9	6.9	4.9	4.2	3.9	4.0
15	---	---	---	---	---	---	5.0	7.0	4.9	4.2	3.9	4.0
16	---	---	---	---	---	---	5.0	7.0	5.0	4.2	3.9	3.9
17	---	---	---	---	---	---	5.1	7.1	5.0	4.0	3.9	3.9
18	---	---	---	---	---	---	5.2	6.7	4.8	4.0	3.8	3.9
19	---	---	---	---	---	---	5.3	6.6	4.8	4.0	3.8	3.9
20	---	---	---	---	---	---	5.5	6.6	4.8	3.9	3.8	4.0
21	---	---	---	---	---	---	5.6	6.5	4.7	3.9	3.9	3.9
22	---	---	---	---	---	---	5.5	6.3	4.7	3.9	3.9	3.9
23	---	---	---	---	---	---	5.5	6.2	4.6	3.9	3.9	3.9
24	---	---	---	---	---	---	5.4	5.8	4.5	4.0	3.8	3.9
25	---	---	---	---	---	---	5.5	5.7	4.5	3.9	3.7	3.9
26	---	---	---	---	---	---	5.7	5.7	4.5	3.9	3.6	3.9
27	---	---	---	---	---	---	5.8	5.7	4.5	3.9	3.6	3.9
28	---	---	---	---	---	---	6.1	5.7	4.5	3.9	3.6	3.9
29	---	---	---	---	---	---	6.6	5.6	4.4	3.9	3.6	4.0
30	---	---	---	---	---	---	6.5	5.5	4.3	3.8	3.5	4.0
31	---	---	---	---	---	---	5.3	5.3	---	3.8	3.6	---
TOTAL	---	---	---	---	---	---	156.7	194.6	146.0	128.1	117.5	115.7
MEAN	---	---	---	---	---	---	5.22	6.28	4.87	4.13	3.79	3.86
MAX	---	---	---	---	---	---	6.6	7.1	5.4	4.6	3.9	4.0
MIN	---	---	---	---	---	---	4.6	5.3	4.3	3.8	3.5	3.6
AC-FT	---	---	---	---	---	---	311	386	290	254	233	229

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1996, BY WATER YEAR (WY)\*

MEAN	5.79	5.28	4.79	4.57	4.38	4.54	5.55	18.4	39.7	13.4	6.91	5.89
MAX	8.45	7.37	6.26	5.97	5.15	5.52	7.47	32.4	105	37.1	11.3	9.37
(WY)	1996	1996	1996	1996	1996	1996	1996	1991	1995	1995	1995	1995
MIN	3.77	4.12	3.78	3.71	3.44	3.78	4.05	12.3	7.71	4.43	3.65	3.65
(WY)	1991	1991	1995	1991	1991	1991	1991	1992	1994	1994	1994	1994

06229900 TROUT CREEK NEAR FORT WASHAKIE, WY--Continued

## SUMMARY STATISTICS

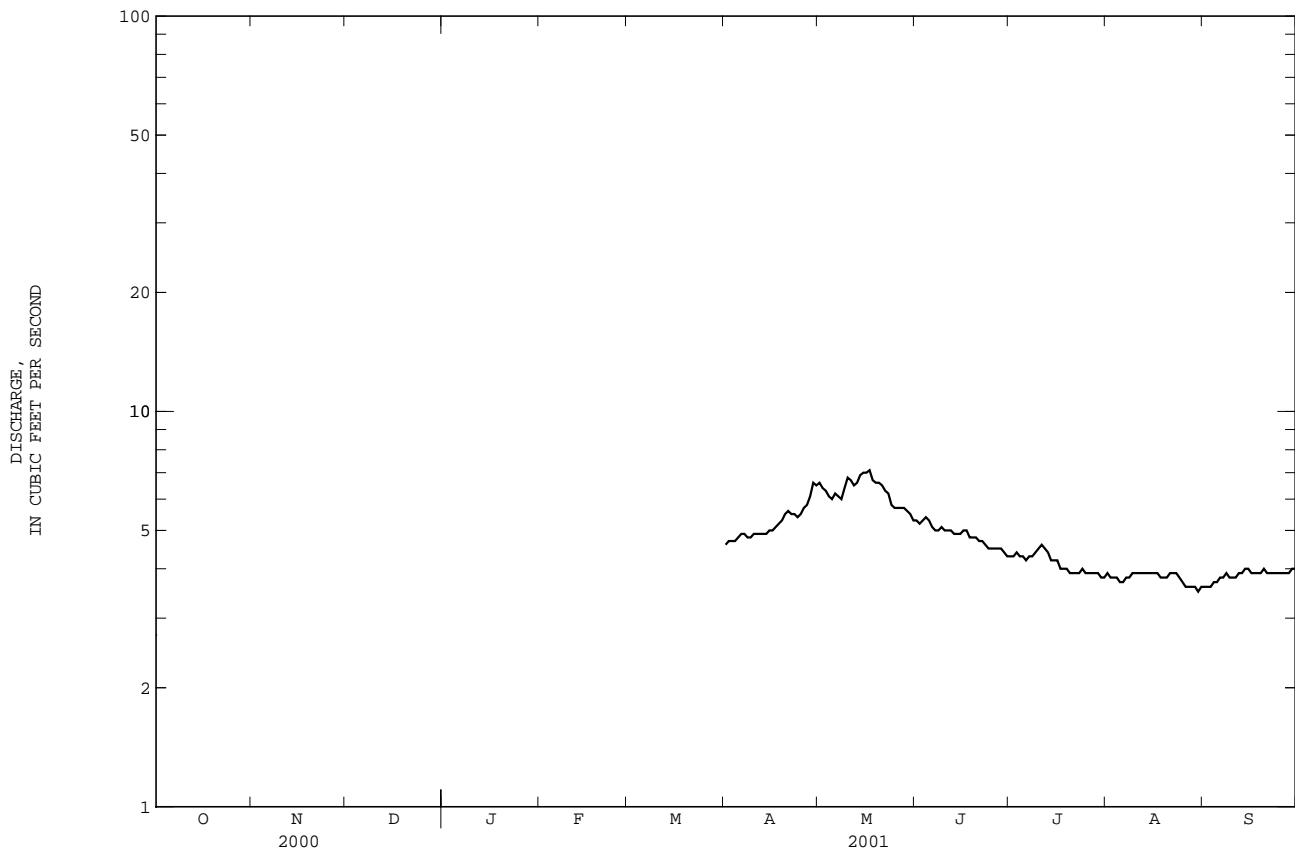
FOR 2001 WATER YEAR\*

WATER YEARS 1990 - 1996\*

ANNUAL MEAN	--	10.4	
HIGHEST ANNUAL MEAN	--	17.3	1995
LOWEST ANNUAL MEAN	--	5.95	1994
HIGHEST DAILY MEAN	7.1 May 17	316	Jun 2 1991
LOWEST DAILY MEAN	3.5 Aug 30	3.0	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	--	3.3	Feb 14 1991
MAXIMUM PEAK FLOW	7.3 May 16	500 <sup>a</sup>	Jun 2 1991#
MAXIMUM PEAK STAGE	4.27 May 16	7.49	Jun 2 1991#
ANNUAL RUNOFF (AC-FT)	--	7550	

\* For period of operation.

# For period of operation, 1961-68, 1970-84, 1990-99 and 2001.

a From rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-conveyance computation of peak flow.

## YELLOWSTONE RIVER BASIN

06232600 POPO AGIE RIVER AT HUDSON SIDING, NEAR LANDER, WY

LOCATION.--Lat 42°51'59", long 108°41'04", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.30, T.2 S., R.2 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank at bridge on private road, 1.2 mi downstream from North Popo Agie River, and 3.2 mi northeast of Lander.

PERIOD OF RECORD.--October 1984 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
DEC 28...	1025	70	638	12.0	98	8.3	491	-1.0	.00	.250	.187	.006	.058
MAR 26...	1110	66	631	11.7	--	8.8	622	--	--	.121	.050	<.006	.035
JUN 07...	1110	79	637	13.2	157	8.7	622	20.0	15.0	E.022	E.032	.018	.055
AUG 13...	1245	27	638	14.0	189	8.8	814	30.0	21.0	E.032	.055	E.005	.086

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
DEC 28...	65	100
MAR 26...	E9k	<1
JUN 07...	36	47
AUG 13...	E11k	E12k

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY

LOCATION.--Lat 42°43'00", long 108°38'34", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.27, T.32 N., R.99 W., Fremont County, Hydrologic Unit 10080003, on left bank 700 ft downstream from bridge on State Highway 28, 2.5 mi downstream from Red Canyon Creek, and 9.5 mi southeast of post office in Lander.

DRAINAGE AREA.--125 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1946 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,436.49 ft above sea level.

REMARKS.--Records good. Diversions for irrigation of about 540 acres upstream from station. Slight regulation by Christina Lake, capacity, about 3,860 acre-ft. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Mar. 26 . . . 23.0

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	22	84	141	53	16	35
2	---	---	---	---	---	---	24	79	141	48	16	29
3	---	---	---	---	---	---	23	52	156	45	15	26
4	---	---	---	---	---	---	24	52	156	43	15	24
5	---	---	---	---	---	---	25	65	134	41	17	23
6	---	---	---	---	---	---	29	69	119	41	40	23
7	---	---	---	---	---	---	25	60	108	42	44	24
8	---	---	---	---	---	---	24	63	104	42	47	29
9	---	---	---	---	---	---	23	62	103	38	48	26
10	---	---	---	---	---	---	25	78	109	38	49	25
11	---	---	---	---	---	---	24	93	109	41	48	22
12	---	---	---	---	---	---	23	113	105	41	48	20
13	---	---	---	---	---	---	21	135	106	39	49	20
14	---	---	---	---	---	---	22	176	94	37	51	20
15	---	---	---	---	---	---	21	213	84	39	52	21
16	---	---	---	---	---	---	21	319	78	38	55	20
17	---	---	---	---	---	---	22	300	77	34	53	20
18	---	---	---	---	---	---	28	201	76	30	49	22
19	---	---	---	---	---	---	34	176	72	27	48	21
20	---	---	---	---	---	---	35	182	70	25	45	21
21	---	---	---	---	---	---	30	154	67	23	47	19
22	---	---	---	---	---	---	30	132	65	23	46	18
23	---	---	---	---	---	---	27	133	65	22	45	18
24	---	---	---	---	---	---	28	148	69	21	43	17
25	---	---	---	---	---	---	32	159	75	19	42	16
26	---	---	---	---	---	---	36	160	76	18	42	16
27	---	---	---	---	---	---	42	167	72	19	42	16
28	---	---	---	---	---	---	45	162	69	19	40	15
29	---	---	---	---	---	---	53	160	64	18	39	15
30	---	---	---	---	---	---	62	144	58	17	37	15
31	---	---	---	---	---	---	---	144	---	17	37	---
TOTAL	---	---	---	---	---	---	880	4235	2822	998	1265	636
MEAN	---	---	---	---	---	---	29.3	137	94.1	32.2	40.8	21.2
MAX	---	---	---	---	---	---	62	319	156	53	55	35
MIN	---	---	---	---	---	---	21	52	58	17	15	15
AC-FT	---	---	---	---	---	---	1750	8400	5600	1980	2510	1260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)\*

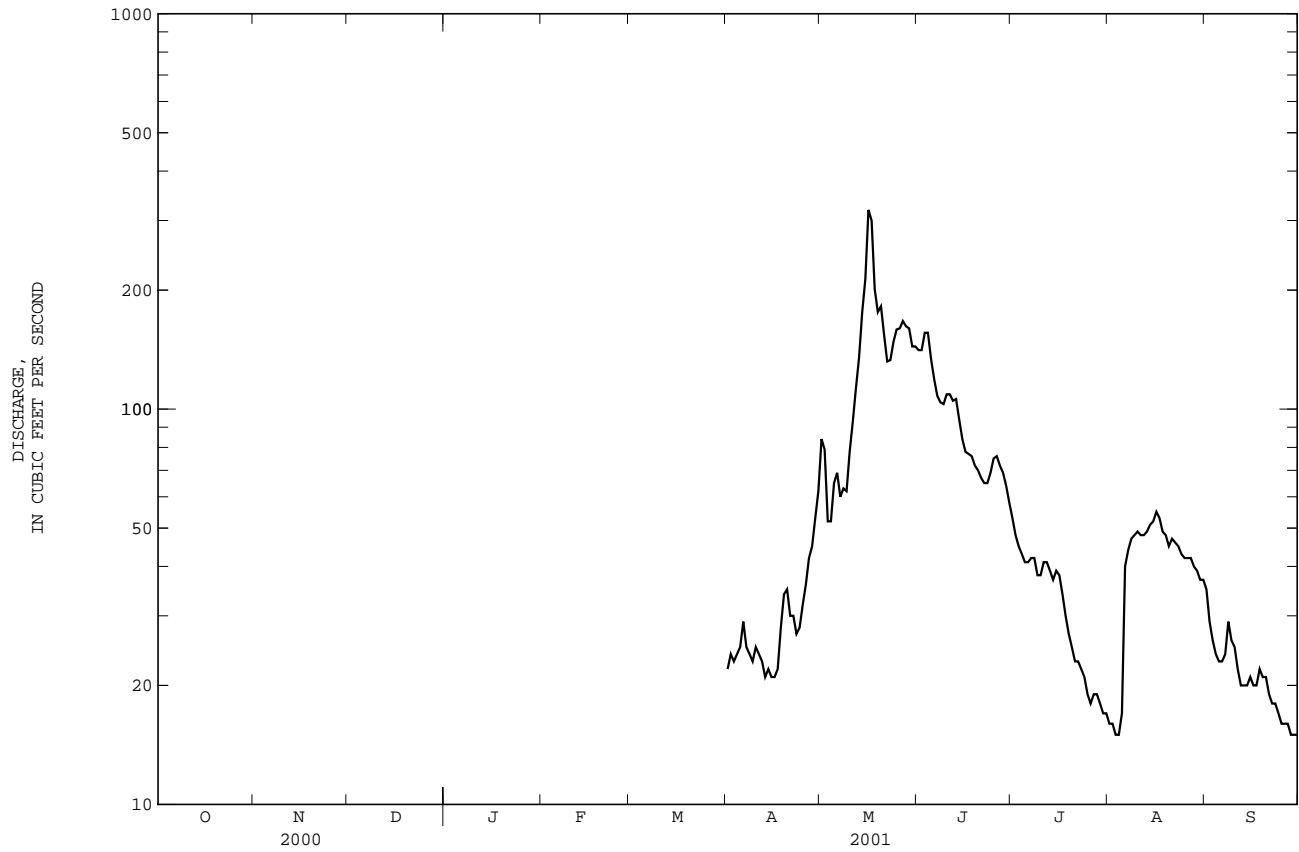
	MEAN	35.6	29.7	25.6	23.4	23.7	24.6	48.6	203	338	135	55.7	46.8
MAX	50.7	41.8	35.8	32.9	42.5	33.9	109	398	856	404	98.6	114	
(WY)	1972	1951	1951	1948	1962	1948	1987	1980	1986	1995	1950	1973	
MIN	22.5	21.4	17.5	13.9	17.4	18.8	26.3	79.3	73.4	32.2	21.9	21.2	
(WY)	1961	1963	1960	1963	1960	1957	1982	1977	1977	2001	1960	2001	

YELLOWSTONE RIVER BASIN

06233000 LITTLE POPO AGIE RIVER NEAR LANDER, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1946 - 2001*	
ANNUAL MEAN	--		80.4	
HIGHEST ANNUAL MEAN	--		131	1965
LOWEST ANNUAL MEAN	--		37.0	1960
HIGHEST DAILY MEAN	319	May 16	1590	Jun 16 1963
LOWEST DAILY MEAN	15	Aug 3,4,Sept. 28-30	12	Several days, 1960,1963
MAXIMUM PEAK FLOW	380	May 16	2010	Jun 16 1963
MAXIMUM PEAK STAGE	3.85	May 16	6.64	Jun 16 1963
ANNUAL RUNOFF (AC-FT)	--		58230	

\* For period of operation.



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LOCATION.--Lat 42°56'47", long 108°30'34", in NE1/4 NE1/4 SW1/4 sec. 27, T.1 S., R.3 E., Fremont County, Hydrologic Unit 10080003, Wind River Indian Reservation, on left bank 1.4 mi southwest of Araphahoe School and 3.0 mi upstream from Little Wind River

PERIOD OF RECORD.--Water years 1980-92, July to September 2001.

		DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K) (00937)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	
JUL	26...	0930	33	638	6.0	81	7.7	1080	26.0	21.0	--	--	--	
AUG	20...	1315	25	657	8.6	113	8.4	1110	28.0	21.0	101	41.5	<.1	
SEP	25...	0830	32	640	7.3	83	7.9	1210	13.0	13.0	--	--	--	
		ANC UNFLTRD TIT 4.5 LAB (MG/L AS CAC03) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS P) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	
JUL	26...	--	--	--	--	--	.48	.006	<.001	<.007	.039	62	56	
AUG	20...	237	9.6	.3	10.6	365	770	.47	<.005	<.001	.035	32	33	
SEP	25...	--	--	--	--	--	.39	.008	.002	<.007	.031	68	57	
		ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	CYANIDE TOTAL (MG/L AS CN) (00720)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)
JUL	26...	--	--	--	--	--	--	--	--	--	--	--	--	
AUG	20...	M	36.3	<13.0	<1	<20.0	<.01	190	<1	140	.07	<3.0	<.40	
SEP	25...	--	--	--	--	--	--	--	--	--	--	--	--	
		2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)
JUL	26...	--	--	--	--	--	--	--	--	--	--	--	--	
AUG	20...	<.002	<.004	<.002	<.005	.011	<.010	<.002	<.041	<.020	<.005	<.018	<.003	
SEP	25...	--	--	--	--	--	--	--	--	--	--	--	--	
		DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)	
JUL	26...	--	--	--	--	--	--	--	--	--	--	--	--	
AUG	20...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	
SEP	25...	--	--	--	--	--</								

## YELLOWSTONE RIVER BASIN

06233900 POPO AGIE RIVER NEAR ARAPAHOE, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENSOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 20...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.005	<.004	<.010
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)		
JUL 26...	--	--	--	--	--	--	--	--	--	54	4.9		
AUG 20...	<.011	<.023	<.011	E.009	<.034	<.017	<.005	<.002	<.009	37	2.5		
SEP 25...	--	--	--	--	--	--	--	--	--	15	1.3		

E -- Estimated value.

M -- Presence verified, not quantified.



06235500 LITTLE WIND RIVER NEAR RIVERTON, WY

LOCATION.--Lat 42°59'51", long 108°22'29", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.11, T.1 S., R.4 E., Fremont County, Hydrologic Unit 10080002, Wind River Indian Reservation, on right bank 1.8 mi upstream from mouth and 1.9 mi southeast of Riverton.

DRAINAGE AREA.--1,904 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1941 to current year. Prior to October 1958, published as Popo Agie River near Riverton.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,901.84 ft above sea level. Prior to Sept. 19, 1956, at site 600 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 62,900 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	280	e160	e153	e129	e126	226	240	469	127	24	18
2	193	288	e164	e148	e139	e128	223	274	e470	116	22	19
3	196	270	e159	e144	e137	e133	224	281	483	108	25	20
4	195	254	e156	e143	e131	e138	219	238	586	98	22	19
5	197	264	e158	e147	e128	e144	217	218	453	103	25	19
6	195	286	e160	e148	e128	e148	219	211	331	96	22	19
7	188	278	e159	e147	e125	e147	217	205	237	89	20	20
8	185	246	e153	e141	e120	e147	202	183	185	87	19	23
9	186	e243	e158	e133	e119	e149	191	165	174	96	18	34
10	187	e206	e163	e137	e124	e150	180	142	176	149	21	40
11	187	e173	e164	e137	e126	e139	172	166	211	119	27	40
12	196	e161	e158	e137	e128	e139	172	209	223	119	31	35
13	203	e153	e152	e140	e129	e148	167	248	239	122	24	32
14	204	e157	e155	e140	e133	e148	161	484	279	122	21	31
15	208	e173	e164	e137	e134	e136	159	839	220	117	19	32
16	214	e161	e162	e134	e135	e132	155	1210	176	123	21	54
17	218	e152	e165	e130	e138	e134	149	1990	153	107	20	53
18	212	e152	e172	e135	e138	e143	149	1320	138	92	24	47
19	212	e157	e173	e135	e133	e156	150	802	127	77	25	49
20	212	e158	e165	e135	e129	e187	175	584	133	67	23	42
21	214	e162	e165	e129	e130	e196	219	636	147	67	21	39
22	233	e165	e162	e129	e130	e197	238	439	150	60	21	38
23	288	e160	e165	e142	e135	e203	240	316	154	54	24	37
24	275	e158	e164	e137	e135	e238	217	321	157	48	27	35
25	270	e155	e155	e132	e132	e274	189	421	141	45	27	33
26	262	e155	e156	e129	e129	280	184	476	169	41	22	34
27	252	e161	e161	e134	e132	267	191	556	174	38	19	33
28	248	e161	e160	e133	e130	250	199	676	155	38	18	32
29	248	e152	e151	e126	---	241	210	675	150	34	18	31
30	246	e152	e150	e128	---	242	232	e620	137	30	17	31
31	251	---	e152	e130	---	238	---	499	---	27	19	---
TOTAL	6779	5793	4961	4250	3656	5498	5846	15644	6997	2616	686	989
MEAN	219	193	160	137	131	177	195	505	233	84.4	22.1	33.0
MAX	288	288	173	153	139	280	240	1990	586	149	31	54
MIN	185	152	150	126	119	126	149	142	127	27	17	18
AC-FT	13450	11490	9840	8430	7250	10910	11600	31030	13880	5190	1360	1960

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

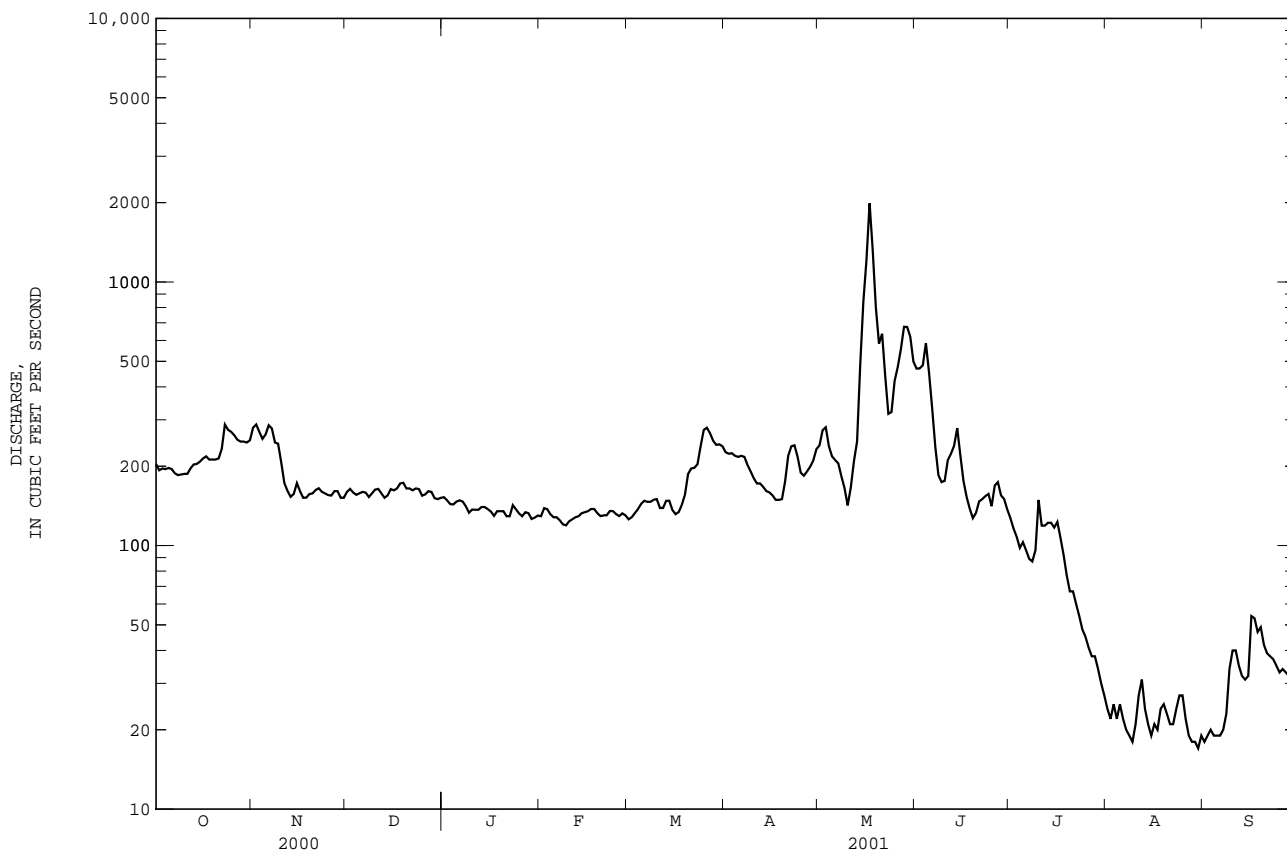
	MEAN	328	284	214	188	211	268	371	1120	2398	999	268	259
MAX	728	501	351	302	728	579	1044	2351	5109	3345	699	1323	
(WY)	1983	1974	1974	1974	1962	1998	1973	1958	1983	1995	1965	1973	
MIN	115	174	129	95.0	123	177	148	242	233	84.4	22.1	33.0	
(WY)	1989	1989	1959	1961	1959	2001	1989	1960	2001	2001	2001	2001	

## YELLOWSTONE RIVER BASIN

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1941 - 2001	
ANNUAL TOTAL	123300		63715		--	
ANNUAL MEAN	337		175		577	
HIGHEST ANNUAL MEAN	--		--		1021	1983
LOWEST ANNUAL MEAN	--		--		175	2001
HIGHEST DAILY MEAN	2640	May 30	1990	May 17	12800	Jun 17 1963
LOWEST DAILY MEAN	45	Aug 29	17	Aug 30	17	Aug 30 2001
ANNUAL SEVEN-DAY MINIMUM	50	Aug 26	18	Aug 27	18	Aug 27 2001
MAXIMUM PEAK FLOW	--		2090	May 17	14700	Jun 17 1963
MAXIMUM PEAK STAGE	--		4.96	May 17	10.85	Jun 17 1963
ANNUAL RUNOFF (AC-FT)	244600		126400		417800	
10 PERCENT EXCEEDS	701		270		1440	
50 PERCENT EXCEEDS	222		152		265	
90 PERCENT EXCEEDS	80		27		145	

e Estimated.



PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1949-58, 1960-64, 1966 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)
DEC 28...	1145	165	648	11.9	96	8.3	775	-2.0	.00	--	--	--	--
FEB 15...	1050	132	638	9.4	77	7.8	862	-9.0	.00	88.1	31.4	2.5	50.7
JUN 07...	1425	238	642	--	--	8.6	674	29.0	21.0	65.5	23.6	2.4	42.5
JUL 18...	1335	92	639	10.4	146	8.4	1080	32.0	23.0	--	--	--	--
AUG 22...	1300	20	640	8.3	115	8.3	1240	27.0	22.5	89.8	43.0	<.1	107
SEP 17...	1200	53	640	8.1	101	8.2	1130	23.0	17.0	--	--	--	--
DATE	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, ORTHO, DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF (COLS./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	E5k	E9k
FEB 15...	194	12.0	.4	11.2	249	600	.23	.279	.003	.011	.024	E6k	E11k
JUN 07...	148	6.5	.3	5.4	197	451	.31	<.005	<.001	.009	.050	E5k	E14k
JUL 18...	--	--	--	--	--	--	.45	.008	.002	E.004	.035	E18k	27
AUG 22...	221	13.5	.5	9.9	424	858	.70	<.005	.001	<.007	.069	<1	E64k
SEP 17...	--	--	--	--	--	--	.44	.009	.001	<.007	.039	--	--
DATE	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	CYANIDE TOTAL (MG/L AS CN) (00720)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	<2	44.4	<13.0	<1	<20.0	<.01	100	<1	28	<.14	<2.6	<.43	<31
JUN 07...	E1	43.4	<13.0	<1	<20.0	<.01	300	<1	38	.01	<3.0	<.40	<31
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	E2	51.9	<13.0	<1	<20.0	<.01	450	M	141	<.01	<3.0	<.40	<31
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, SOLVED (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL-A-TE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA, WATER, FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	<.002	<.004	<.002	<.005	.031	<.010	<.002	<.041	E.007	<.005	<.018	<.003	E.008
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	<.002	<.004	<.002	<.005	.014	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.005
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--

## YELLOWSTONE RIVER BASIN

06235500 LITTLE WIND RIVER NEAR RIVERTON, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--	<.02
JUN 07...	<.005	<.005	<.021	.253	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.07
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUCIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 07...	.014	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.004	<.004	<.010
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, SUS- PENDE (T/DAY) (80155)		
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 15...	--	--	--	--	--	--	--	--	--	--	46	16	
JUN 07...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	22	14		
JUL 18...	--	--	--	--	--	--	--	--	--	22	5.5		
AUG 22...	<.011	<.023	<.011	E.006	<.034	<.017	<.005	<.002	<.009	30	1.6		
SEP 17...	--	--	--	--	--	--	--	--	--	76	11		

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY

LOCATION.--Lat 43°07'45", long 108°13'24", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.24, T.2 N., R.5 E., Fremont County, Hydrologic Unit 10080001, on left bank 5.3 mi upstream from Boysen Reservoir and 9.4 mi southwest of Shoshoni.

DRAINAGE AREA.--4,390 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,775 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 191,000 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	761	e500	e390	e340	e400	586	341	541	236	135	123
2	366	768	e500	e380	e350	e400	556	369	512	213	134	126
3	355	731	e490	e380	e360	e410	479	407	530	187	137	130
4	362	680	e490	e370	e370	e430	426	392	650	165	129	162
5	358	662	e480	e380	e370	e430	417	326	579	166	132	198
6	344	714	e480	e390	e380	e440	402	316	464	169	127	204
7	333	725	e500	e400	e370	e440	393	298	363	158	116	225
8	325	649	e520	e380	e350	e440	372	282	301	150	118	250
9	330	663	e500	e370	e338	e460	352	262	268	151	117	214
10	326	654	e480	e350	e330	e460	336	238	268	224	120	222
11	321	552	e470	e360	e330	e470	323	228	287	206	131	223
12	327	e540	e450	e370	e340	e460	314	276	322	188	133	189
13	339	e520	e420	e370	e350	e450	312	346	345	175	134	162
14	367	e520	e400	e370	e360	e440	300	505	399	158	136	156
15	361	e520	e400	e360	e350	e440	287	870	358	165	136	163
16	368	e500	e420	e350	e350	e450	279	1160	294	178	138	208
17	366	e480	e410	e340	e360	e460	269	2240	256	169	145	219
18	363	e460	e400	e340	e360	e460	262	1420	240	154	132	218
19	362	e460	e410	e340	e360	e470	263	825	240	147	137	234
20	361	e460	e380	e350	e370	e480	276	612	236	134	141	245
21	361	e460	e370	e350	e370	e480	336	665	278	132	148	281
22	389	e460	e370	e350	e380	e500	363	549	288	139	143	e400
23	442	e460	e370	e360	e380	e520	365	438	283	143	129	e380
24	429	e480	e370	e350	e380	e560	340	395	298	138	125	e370
25	413	e490	e370	e350	e390	e600	293	474	289	139	137	e370
26	616	e500	e370	e360	e400	e660	279	520	268	144	127	e360
27	746	e500	e380	e370	e420	e740	276	585	305	147	128	e370
28	751	e500	e380	e370	e410	e660	316	690	283	150	119	e380
29	746	e520	e390	e360	---	633	317	735	263	146	113	e390
30	732	e520	e380	e350	---	608	329	646	241	153	113	e400
31	730	---	e380	e350	---	604	---	595	---	141	124	---
TOTAL	13367	16909	13230	11260	10218	15455	10418	18005	10249	5065	4034	7572
MEAN	431	564	427	363	365	499	347	581	342	163	130	252
MAX	751	768	520	400	420	740	586	2240	650	236	148	400
MIN	321	460	370	340	330	400	262	228	236	132	113	123
AC-FT	26510	33540	26240	22330	20270	30650	20660	35710	20330	10050	8000	15020

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	780	812	567	546	561	700	636	1786	4770	2070	642	551
MAX	1455	1212	719	665	755	1096	1074	4175	9432	6650	1696	860
(WY)	1999	1999	1996	1996	1996	1998	1999	1999	1999	1995	1997	1997
MIN	393	564	427	356	361	499	347	513	342	163	130	252
(WY)	1993	2001	2001	1993	1994	2001	2001	1990	2001	2001	2001	2001

## YELLOWSTONE RIVER BASIN

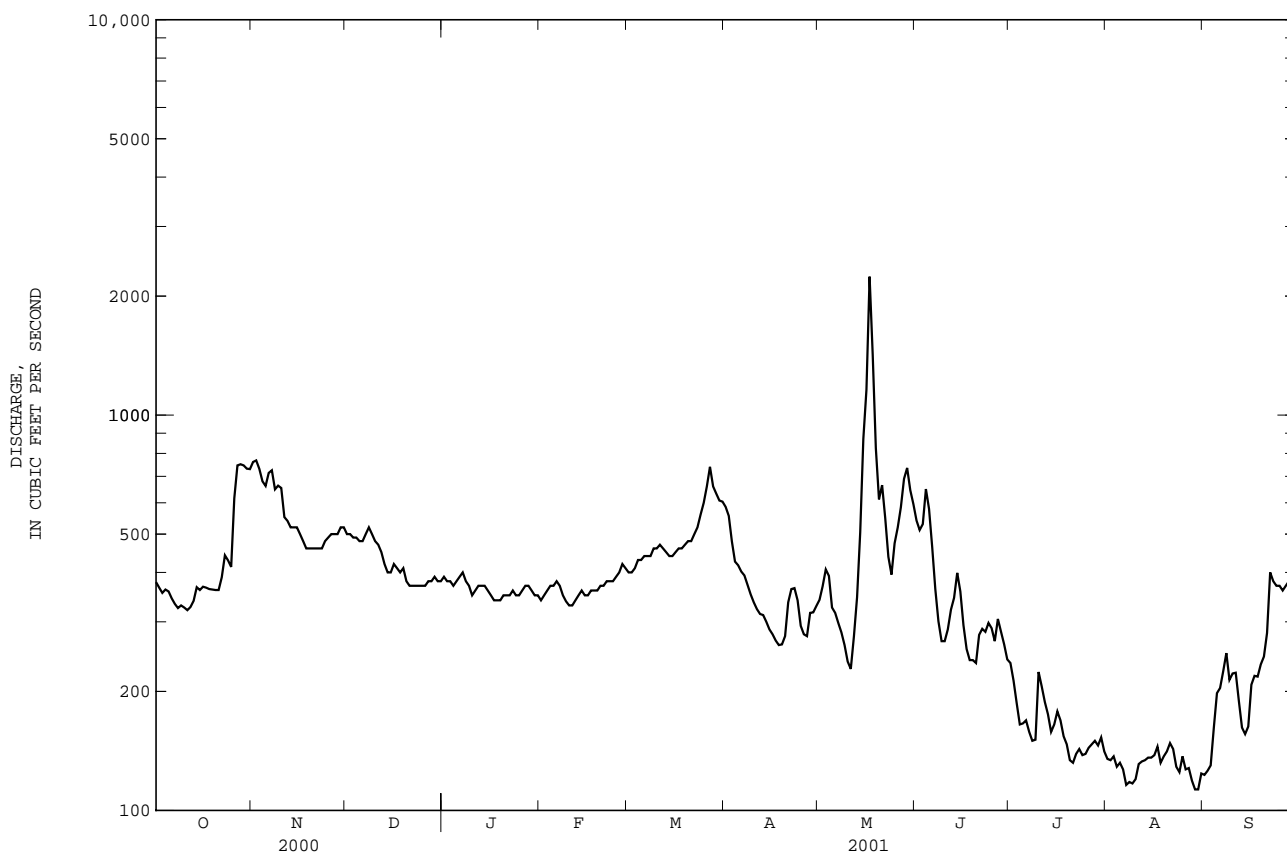
06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1990 - 2001	
ANNUAL TOTAL	222777		135782		--	
ANNUAL MEAN	609		372		1240	
HIGHEST ANNUAL MEAN	--		--		2063	1999
LOWEST ANNUAL MEAN	--		--		372	2001
HIGHEST DAILY MEAN	3880	May 30	2240	May 17	17900	Jun 14 1991
LOWEST DAILY MEAN	180	Aug 30	113	Aug 29,30	113	Aug 29,30 2001
ANNUAL SEVEN-DAY MINIMUM	201	Aug 24	121	Aug 27	121	Aug 27 2001
MAXIMUM PEAK FLOW	--		2610 <sup>a</sup>	May 17	18700	Jun 14 1991
MAXIMUM PEAK STAGE	--		5.80 <sup>b</sup>	Nov 13	9.31	Jun 14 1991
ANNUAL RUNOFF (AC-FT)	441900		269300		898500	
10 PERCENT EXCEEDS	927		585		2380	
50 PERCENT EXCEEDS	500		362		638	
90 PERCENT EXCEEDS	270		141		348	

a Gage height, 3.83 ft.

b Backwater from ice.

e Estimated.



WATER-QUALITY RECORDS

SEDIMENT LOADS: Maximum daily during period of operation, 6,260 tons, May 17; minimum daily during period of operation, 6.7 tons, July 4, 5.

[illegible]

## YELLOWSTONE RIVER BASIN

06236100 WIND RIVER ABOVE BOYSEN RESERVOIR, NEAR SHOSHONI, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L) (38260)
JUN 06...	<.005	<.005	<.021	.097	<.009	<.005	<.003	<.004	<.035	E.017	<.050	<.006	.02
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	E.009	<.050	<.006	.04
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUN 06...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.008	<.004	<.010
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)		
JUN 06...	<.011	<.023	<.011	E.004	<.034	<.017	<.005	<.002	<.009	12	17		
JUL 18...	--	--	--	--	--	--	--	--	--	44	18		
AUG 22...	<.011	<.023	<.011	E.009	<.034	<.017	<.005	<.002	<.009	32	14		
SEP 18...	--	--	--	--	--	--	--	--	--	60	36		

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).



SUSPENDED-SEDIMENT, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS/ DAY)
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	62	115	93	136	29	19	---	---	---	---
2	---	---	109	109	81	112	31	18	---	---	---	---
3	---	---	108	119	83	119	23	12	---	---	---	---
4	---	---	101	107	124	218	15	6.7	---	---	---	---
5	---	---	114	101	128	201	15	6.7	---	---	---	---
6	---	---	79	67	59	75	19	8.5	---	---	---	---
7	---	---	86	69	42	41	32	14	---	---	---	---
8	---	---	54	41	46	37	22	9.0	---	---	---	---
9	---	---	40	28	25	18	54	22	---	---	---	---
10	---	---	39	25	23	17	250	154	---	---	---	---
11	---	---	42	26	30	23	150	83	---	---	---	---
12	---	---	59	44	36	31	59	30	---	---	---	---
13	---	---	93	88	27	25	35	17	---	---	---	---
14	---	---	186	259	30	32	29	12	---	---	---	---
15	---	---	391	945	33	31	36	16	---	---	---	---
16	---	---	482	1520	45	36	51	24	---	---	---	---
17	---	---	1030	6260	34	23	38	18	---	---	---	---
18	---	---	1160	4610	28	18	34	14	---	---	---	---
19	---	---	463	1070	35	23	52	21	---	---	---	---
20	---	---	176	297	38	24	53	19	---	---	---	---
21	---	---	163	292	45	34	45	16	---	---	---	---
22	---	---	111	167	36	28	69	26	---	---	---	---
23	---	---	85	101	32	24	160	62	---	---	---	---
24	---	---	79	84	37	30	48	18	---	---	---	---
25	---	---	90	115	37	29	45	17	---	---	---	---
26	---	---	98	138	39	28	62	24	---	---	---	---
27	---	---	132	209	42	35	42	16	---	---	---	---
28	---	---	143	267	34	26	43	17	---	---	---	---
29	---	---	158	315	30	22	63	25	---	---	---	---
30	---	---	113	199	36	24	73	30	---	---	---	---
31	---	---	105	169	---	---	26	10	---	---	---	---
TOTAL	---	---	---	17956	---	1520	---	784.9	---	---	---	---
YEAR	20260.9											

## YELLOWSTONE RIVER BASIN

06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY

LOCATION.--Lat 43°18'05", long 108°42'08", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.24, T.4 N., R.1 E., Fremont County, Hydrologic Unit 10080005, on left bank 1,700 ft upstream from Wyoming Canal siphon and 4.0 mi north of Pavillion.

DRAINAGE AREA.--118 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1949 to September 1975, October 1988 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,500 ft above sea level, from topographic map. Aug. 27, 1948, to Mar. 28, 1950, at site 0.2 mi downstream at different datum. Mar. 29, 1950, to Apr. 23, 1974, at site 325 ft downstream at present datum. Apr. 24, 1974, to September 30, 1975, at site 25 ft downstream at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by reservoir system about 10.5 mi upstream. Diversion for irrigation of about 320 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in September 1948 reached a stage of about 6.1 ft, discharge, 2,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	7.1	e5.4	e6.2	e6.6	e9.0	9.7	7.0	4.1	.51	.07	.21
2	3.0	7.3	e5.5	e6.0	e7.1	e8.9	9.3	6.8	4.0	.33	.07	.10
3	2.9	7.5	e5.6	e6.0	e7.4	e8.7	9.1	6.8	4.0	.18	.08	.10
4	3.4	7.3	e6.0	e6.2	e7.6	e8.6	9.0	6.8	3.8	.10	.08	.11
5	3.8	7.6	e6.1	e6.6	e7.4	e8.5	8.7	6.8	3.6	.09	.09	.12
6	4.2	7.3	e6.2	e7.1	e7.6	e8.6	8.5	6.5	3.2	.08	.09	.50
7	4.6	6.2	e6.3	e7.0	e7.0	e8.8	8.2	6.0	2.7	.08	.10	13
8	4.9	5.3	e6.4	e6.8	e6.7	e9.2	8.1	5.5	2.6	.09	.11	4.4
9	5.2	3.1	e6.4	e6.6	e6.3	e10	7.7	5.4	2.4	.10	.10	2.4
10	5.3	3.0	e6.0	e6.4	e6.5	e11	6.7	5.0	2.1	.10	.11	1.8
11	5.5	2.7	e5.7	e6.4	e6.8	e11	6.7	4.9	2.0	4.6	.11	1.8
12	5.5	2.5	e5.4	e6.4	e7.1	e11	6.9	4.8	2.2	1.2	.11	1.5
13	5.5	e3.0	e5.4	e6.3	e7.1	13	6.7	4.7	3.0	5.1	.11	1.5
14	5.7	e3.9	e5.4	e6.1	e7.0	12	6.6	4.6	2.4	1.4	.12	2.1
15	6.1	e4.5	e5.6	e5.9	e6.9	13	6.4	4.6	2.1	1.6	.12	3.6
16	5.7	e4.6	e6.0	e5.8	e7.0	15	6.4	3.6	1.8	1.6	.12	3.8
17	5.7	e4.6	e6.2	e5.6	e7.2	13	6.5	2.8	1.8	1.2	.11	3.2
18	6.0	e4.7	e6.1	e5.4	e7.4	11	6.6	2.5	1.8	1.1	.11	3.3
19	6.0	e4.8	e6.0	e5.4	e7.8	11	6.8	2.6	1.8	1.2	.11	3.3
20	6.4	e4.8	e5.9	e5.5	e8.0	12	6.7	2.7	1.8	1.0	.11	2.8
21	6.6	e4.8	e6.0	e5.6	e8.0	11	7.6	3.1	1.8	.84	.11	2.7
22	7.4	e4.9	e6.1	e5.8	e8.4	11	7.6	3.1	1.6	.71	.11	2.5
23	7.4	e5.0	e6.1	e6.0	e8.8	11	7.6	3.1	1.4	.64	.11	2.6
24	7.5	e5.0	e6.1	e6.3	e9.2	10	7.7	3.2	1.4	.68	7.4	2.5
25	7.6	e5.2	e6.1	e6.3	e9.0	10	7.8	3.4	1.3	.52	13	2.6
26	7.6	e5.2	e6.1	e6.3	e8.6	10	7.9	3.9	1.2	.50	2.9	2.8
27	8.0	e5.0	e6.2	e6.2	e9.0	10	7.8	4.3	1.2	.63	1.2	2.9
28	8.1	e4.8	e6.3	e5.9	e9.4	9.9	8.0	4.4	1.1	.41	.96	3.0
29	7.1	e5.7	e6.6	e5.8	---	9.8	7.8	4.3	.86	.18	.88	3.2
30	7.0	e5.6	e6.7	e6.0	---	9.8	7.2	4.1	.67	.10	.75	3.4
31	7.0	---	e6.4	e6.3	---	9.7	---	4.1	---	.08	.43	---
TOTAL	179.7	153.0	186.3	190.2	212.9	325.5	228.3	141.4	65.73	26.95	29.88	77.84
MEAN	5.80	5.10	6.01	6.14	7.60	10.5	7.61	4.56	2.19	.87	.96	2.59
MAX	8.1	7.6	6.7	7.1	9.4	15	9.7	7.0	4.1	5.1	13	13
MIN	2.9	2.5	5.4	5.4	6.3	8.5	6.4	2.5	.67	.08	.07	.10
AC-FT	356	303	370	377	422	646	453	280	130	53	59	154

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2001, BY WATER YEAR (WY)

MEAN	3.08	3.40	2.45	2.47	3.96	5.80	4.80	5.36	5.85	2.05	1.07	2.81
MAX	6.98	10.2	6.69	7.72	10.6	13.3	8.95	53.4	48.8	17.8	7.53	14.5
(WY)	1994	1992	1993	1994	1991	1993	1994	1991	1991	1997	1997	1973
MIN	.000	.000	.000	.000	.000	.27	.097	.38	.043	.000	.000	.000
(WY)	1955	1955	1953	1951	1956	1954	1954	1955	1952	1956	1954	1952

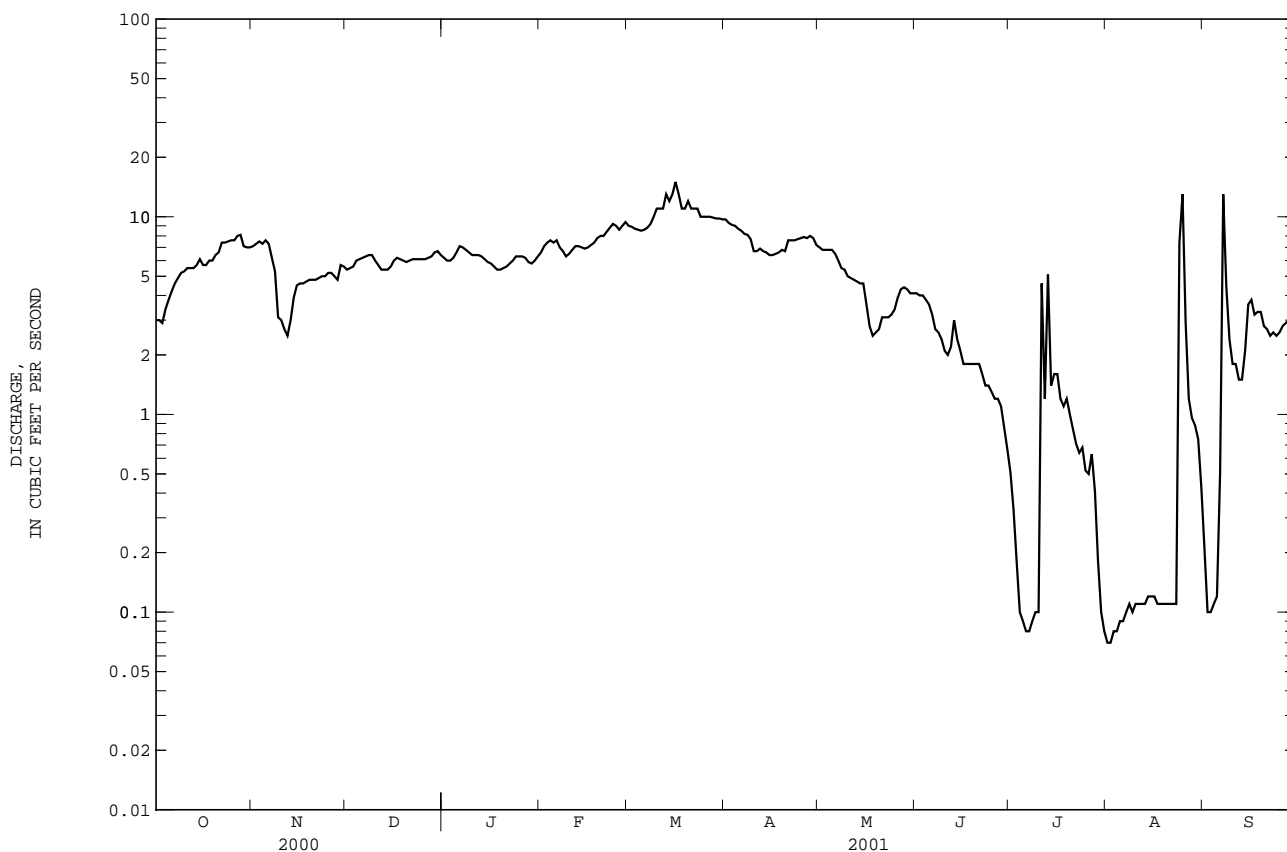
06244500 FIVEMILE CREEK ABOVE WYOMING CANAL, NEAR PAVILLION, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1950 - 2001
ANNUAL TOTAL	1386.27	1817.70	--
ANNUAL MEAN	3.79	4.98	3.58
HIGHEST ANNUAL MEAN	--	--	12.4
LOWEST ANNUAL MEAN	--	--	.25
HIGHEST DAILY MEAN	9.6 Mar 8	15 Mar 16	273 Sep 20 1950
LOWEST DAILY MEAN	.02 Jul 18	.07 Aug 1,2	.00 Several days, most years
ANNUAL SEVEN-DAY MINIMUM	.02 Aug 4	.08 Jul 31	.00 Several days, most years
MAXIMUM PEAK FLOW	--	24 Mar 16	1750 <sup>a</sup>
MAXIMUM PEAK STAGE	--	1.98 Mar 16	5.60 <sup>b</sup>
ANNUAL RUNOFF (AC-FT)	2750	3610	2590
10 PERCENT EXCEEDS	7.3	8.8	7.7
50 PERCENT EXCEEDS	4.2	5.5	2.2
90 PERCENT EXCEEDS	.04	.16	.00

a From rating curve extended above 350 ft<sup>3</sup>/s.

b From floodmarks.

e Estimated.



## YELLOWSTONE RIVER BASIN

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY

LOCATION.--Lat 43°13'20", long 108°13'06", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.19, T.3 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 1.2 mi upstream from normal high-water line of Boysen Reservoir at elevation 4,725 ft and 5.0 mi west of Shoshoni.

DRAINAGE AREA.--418 mi<sup>2</sup>, of which 133 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--May 1941 to September 1942, August 1948 to September 1983, October 1988 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,750 ft above sea level, from topographic map. May 10, 1941 to Sept. 30, 1942, nonrecording gage at site 1.0 mi downstream at different datum. Aug. 28, 1948 to Sept. 30, 1983, at same site and datum.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Natural flow of stream affected by regulation from reservoir system in the headwaters, diversions for irrigation, and return flow from irrigated areas. Data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 24, 1923, discharge, 3,500 ft<sup>3</sup>/s, from estimate provided by Bureau of Reclamation, gage height not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	92	e64	e61	e58	e61	59	158	208	213	226	210
2	192	90	e65	e62	e60	e63	59	153	210	226	229	189
3	190	88	e64	e60	e64	e65	58	142	216	218	191	177
4	162	87	e64	e60	e62	e66	58	146	220	207	195	162
5	140	89	e64	e60	e62	e65	58	138	228	230	193	144
6	131	87	e66	e60	e62	e65	59	133	223	224	183	125
7	127	84	e67	e59	e59	e65	58	132	221	221	187	110
8	125	83	e68	e59	e52	e64	57	158	212	209	181	106
9	123	85	e68	e56	e47	e62	51	136	202	185	175	95
10	122	80	e64	e58	e46	e64	57	146	198	209	178	90
11	120	82	e62	e58	e47	e62	94	176	195	221	171	87
12	127	80	e60	e58	e50	e63	87	179	217	213	171	87
13	128	e81	e60	e58	e50	e62	61	162	226	212	181	87
14	116	e78	e60	e57	e50	e62	89	156	229	206	190	87
15	114	e75	e62	e56	e52	e58	84	140	222	194	191	87
16	112	e70	e68	e54	e52	55	72	174	213	193	185	85
17	109	e67	e66	e54	e52	57	88	174	224	190	166	82
18	108	e65	e65	e56	e52	59	122	179	222	188	173	83
19	107	e66	e64	e58	e56	58	110	177	210	186	175	79
20	106	e66	e62	e60	e56	61	118	184	214	206	180	77
21	107	e66	e61	e58	e58	61	130	205	218	211	176	75
22	110	e66	e62	e58	e61	60	124	197	212	206	182	69
23	108	e64	e63	e58	e67	60	126	213	205	215	177	66
24	107	e64	e64	e58	e68	58	151	207	199	209	180	65
25	105	e66	e64	e56	e68	57	198	199	204	212	176	65
26	103	e67	e64	e56	e68	58	177	207	218	217	178	63
27	100	e67	e63	e56	e68	58	156	217	224	216	170	62
28	98	e68	e62	e56	e66	57	149	215	217	221	159	62
29	96	e67	e60	e55	---	58	151	217	212	221	157	62
30	94	e65	e60	e54	---	58	150	199	206	218	158	61
31	93	---	e60	e55	---	58	---	197	---	215	168	---
TOTAL	3782	2255	1966	1784	1613	1880	3011	5416	6425	6512	5602	2899
MEAN	122	75.2	63.4	57.5	57.6	60.6	100	175	214	210	181	96.6
MAX	202	92	68	62	68	66	198	217	229	230	229	210
MIN	93	64	60	54	46	55	51	132	195	185	157	61
AC-FT	7500	4470	3900	3540	3200	3730	5970	10740	12740	12920	11110	5750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1941	147	298	2000	18.0	1942
1942	80.1	135	1998	14.8	1942
1943	59.2	114	1998	8.25	1942
1944	50.8	89.9	1998	2.60	1942
1945	48.7	79.5	1959	6.24	1942
1946	52.6	87.2	1963	17.8	1942
1947	82.0	201	1999	12.7	1942
1948	180	275	1999	28.1	1942
1949	279	442	1976	97.4	1941
1950	330	524	1983	141	1977
1951	337	525	1983	139	1977
1952	289	527	1999	88.4	1941

06253000 FIVEMILE CREEK NEAR SHOSHONI, WY--Continued

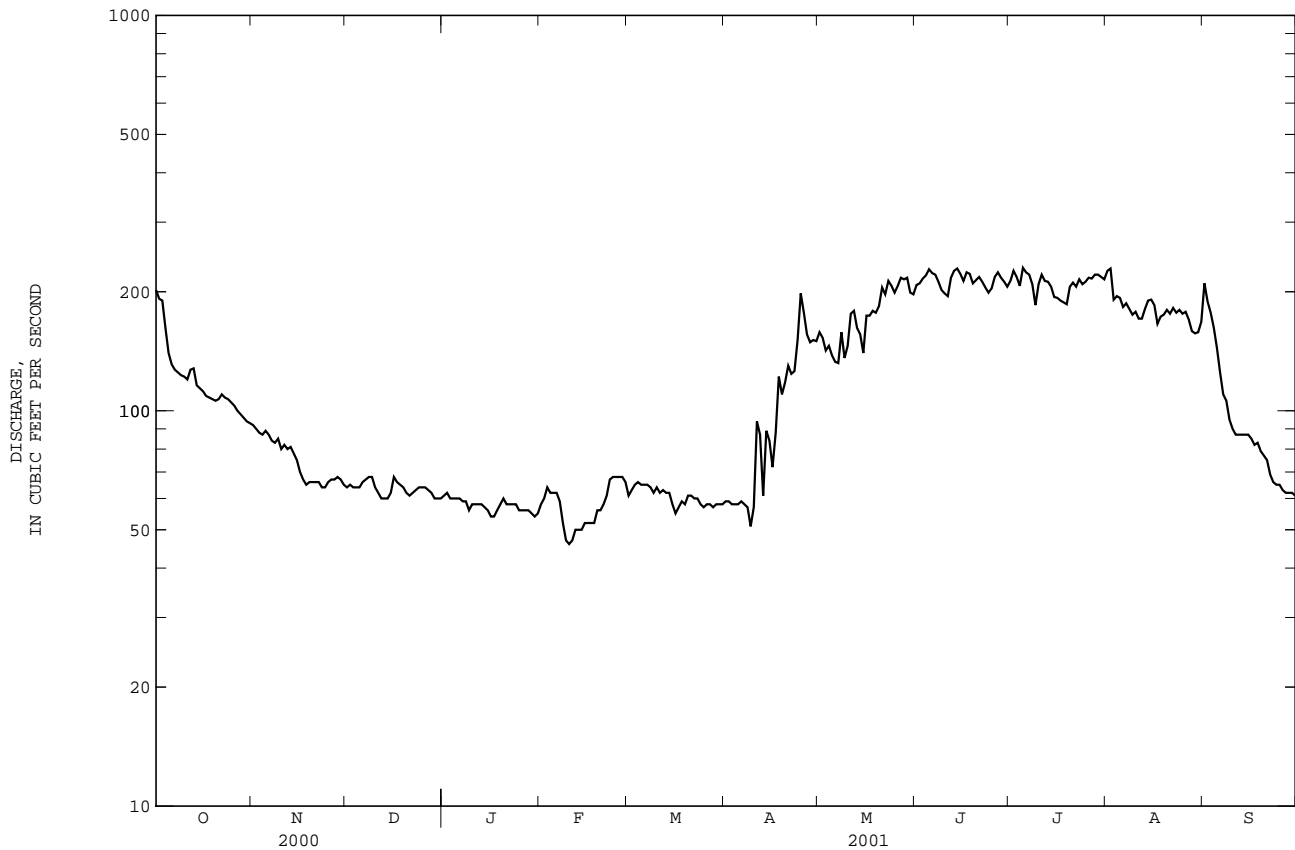
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1941 - 2001	
ANNUAL TOTAL	59317		43145		--	
ANNUAL MEAN	162		118		163	
HIGHEST ANNUAL MEAN	--		--		253	1999
LOWEST ANNUAL MEAN	--		--		54.8	1942
HIGHEST DAILY MEAN	350	Jul 20	230	Jul 5	964	Sep 11 1973
LOWEST DAILY MEAN	41	Apr 10	46	Feb 10	1.0	Jan 4 1942
ANNUAL SEVEN-DAY MINIMUM	44	Apr 5	49	Feb 8	1.4	Jan 1 1942
MAXIMUM PEAK FLOW	--		257 <sup>a</sup>	Oct 3	3390 <sup>b</sup>	Jun 15 1962
MAXIMUM PEAK STAGE	--		6.29 <sup>c</sup>	Mar 12	9.61 <sup>c</sup>	Dec 27 1954
ANNUAL RUNOFF (AC-FT)	117700		85580		118300	
10 PERCENT EXCEEDS	301		213		363	
50 PERCENT EXCEEDS	110		88		104	
90 PERCENT EXCEEDS	56		58		40	

a Gage height, 3.19 ft.

b Gage height, 7.85 ft.

c Backwater from ice.

e Estimated.



## YELLOWSTONE RIVER BASIN

06258900 BOYSEN RESERVOIR NEAR SHOSHONI, WY

LOCATION.--Lat 43°25'00", long 108°10'37", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.16, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, at dam on Wind River and 13 mi north of Shoshoni.

DRAINAGE AREA.--7,700 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum of 1933).

REMARKS.--Reservoir is formed by rockfill dam completed by Bureau of Reclamation in October 1951. Capacity, 802,000 acre-ft below elevation 4,725.00 ft, top of spillway gate. Includes 59,880 acre-ft dead storage below elevation 4,657.00 ft, invert of penstock pipe. Figures given herein represent total contents. Water used for irrigation, flood control, and power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 992,000 acre-ft, July 6, 7, 1967, elevation, 4,730.83 ft; minimum daily contents (since normal use of water started), 252,000 acre-ft, Mar. 18, 19, 1956, elevation, 4,684.18 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 542,000 acre-ft, Oct. 1, maximum daily elevation, 4,713.41 ft, Oct. 1; minimum daily contents, 304,000 acre-ft, Sept. 30, minimum daily elevation, 4,694.04 ft.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

4,690	265,000	4,695	314,000
4,700	368,000	4,715	566,000
4,705	427,000	4,710	493,000
4,710	443,000	4,705	427,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

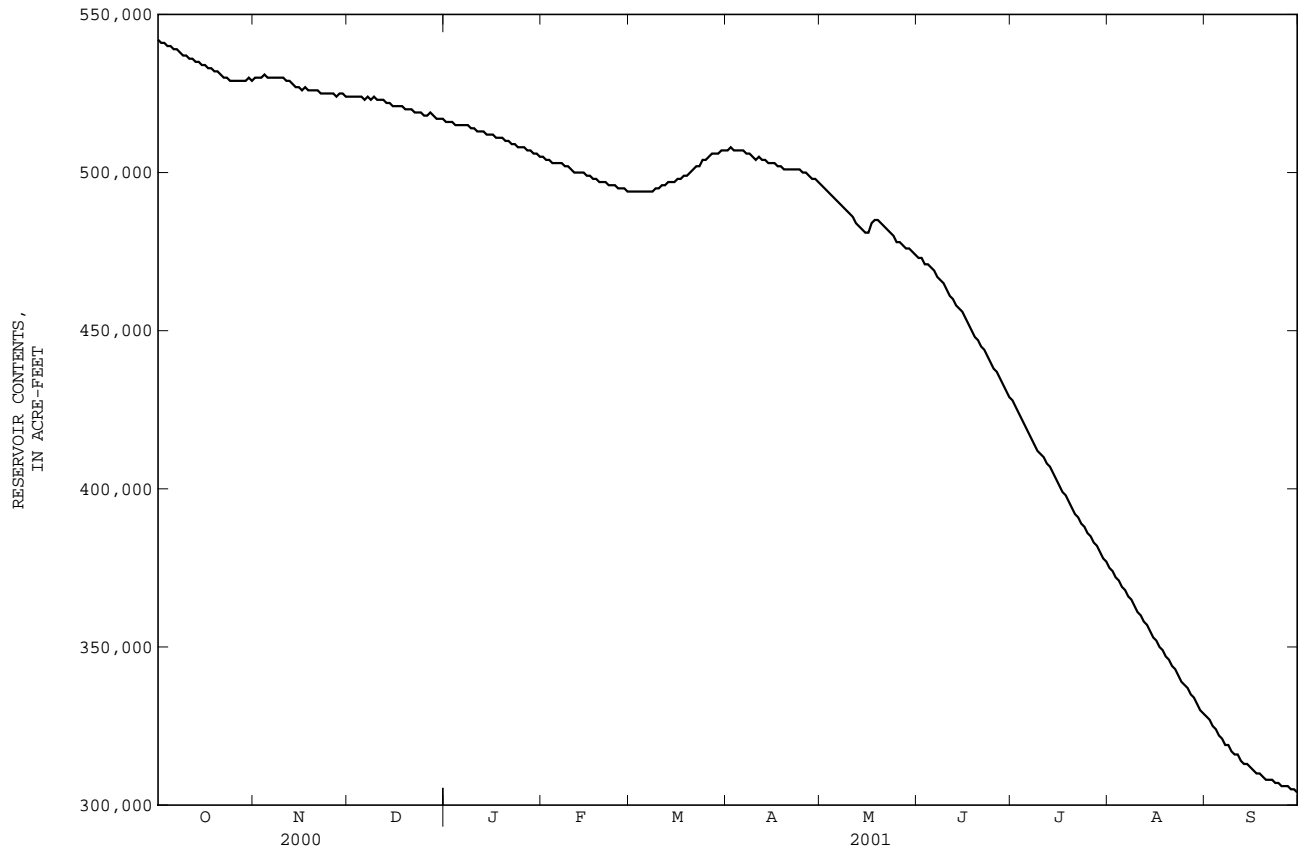
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	542000	530000	524000	516000	505000	494000	507000	496000	473000	428000	375000	328000
2	541000	530000	524000	516000	504000	494000	508000	495000	473000	426000	374000	327000
3	541000	530000	524000	516000	504000	494000	507000	494000	471000	424000	372000	325000
4	540000	531000	524000	515000	503000	494000	507000	493000	471000	422000	371000	324000
5	540000	530000	524000	515000	503000	494000	507000	492000	470000	420000	369000	322000
6	539000	530000	523000	515000	503000	494000	507000	491000	469000	418000	368000	321000
7	539000	530000	524000	515000	503000	494000	506000	490000	467000	416000	366000	319000
8	538000	530000	523000	515000	502000	494000	506000	489000	466000	414000	365000	319000
9	537000	530000	524000	514000	502000	495000	505000	488000	465000	412000	363000	317000
10	537000	530000	523000	514000	501000	495000	504000	487000	463000	411000	361000	316000
11	536000	529000	523000	513000	500000	496000	505000	486000	461000	410000	360000	316000
12	536000	529000	523000	513000	500000	496000	504000	484000	460000	408000	358000	314000
13	535000	528000	522000	513000	500000	497000	504000	483000	458000	407000	357000	313000
14	535000	527000	522000	512000	500000	497000	503000	482000	457000	405000	355000	313000
15	534000	527000	521000	512000	499000	497000	503000	481000	456000	403000	353000	312000
16	534000	526000	521000	512000	499000	498000	503000	481000	454000	401000	352000	311000
17	533000	527000	521000	511000	498000	498000	502000	484000	452000	399000	350000	310000
18	533000	526000	521000	511000	498000	499000	502000	485000	450000	398000	349000	310000
19	532000	526000	520000	511000	497000	499000	501000	485000	448000	396000	347000	309000
20	532000	526000	520000	510000	497000	500000	501000	484000	447000	394000	346000	308000
21	531000	526000	520000	510000	497000	501000	501000	483000	445000	392000	344000	308000
22	530000	525000	519000	509000	496000	502000	501000	482000	444000	391000	343000	308000
23	530000	525000	519000	509000	496000	502000	501000	481000	442000	389000	341000	307000
24	529000	525000	519000	508000	496000	504000	501000	480000	440000	388000	339000	307000
25	529000	525000	518000	508000	495000	504000	500000	478000	438000	386000	338000	306000
26	529000	525000	518000	508000	495000	505000	500000	478000	437000	385000	337000	306000
27	529000	524000	519000	507000	495000	506000	499000	477000	435000	383000	335000	306000
28	529000	525000	518000	507000	494000	506000	498000	476000	433000	382000	334000	305000
29	529000	525000	517000	506000	---	506000	498000	476000	431000	380000	332000	305000
30	530000	524000	517000	506000	---	507000	497000	475000	429000	378000	330000	304000
31	529000	---	517000	505000	---	507000	---	474000	---	377000	329000	---
MAX	542000	531000	524000	516000	505000	507000	508000	496000	473000	428000	375000	328000
MIN	529000	524000	517000	505000	494000	494000	497000	474000	429000	377000	329000	304000
(#)	4712.58	4712.24	4711.72	4710.91	4710.12	4711.03	4710.32	4708.62	4705.16	4700.89	4696.41	4694.04
(*)	-13,000	-5,000	-7,000	-12,000	-11,000	13,000	-10,000	-23,000	-45,000	-52,000	-48,000	-25,000

WTR YR 2001 MAX 542,000 MIN 304,000 (\*) -238,000

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.

06258900 BOYSEN RESERVOIR NEAR SHOSHONI, WY--Continued



## YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY

LOCATION.--Lat 43°25'30", long 108°10'42", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.9, T.5 N., R.6 E., Fremont County, Hydrologic Unit 10080005, on right bank 0.6 mi downstream from Boysen Dam and 13 mi north of Shoshoni.

DRAINAGE AREA.--7,701 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1951 to current year.

REVISED RECORDS.--WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,608.58 ft above sea level.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Boysen Reservoir (See station 06258900) since October 1951. Natural flow also affected by Bull Lake, Pilot Butte Reservoir, and several small reservoirs, combined capacity, 190,000 acre-ft, and diversions for irrigation of about 196,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and data provided by Bureau of Reclamation from April 1998; record computed and reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	653	723	709	709	702	643	612	951	1220	e1280	1050	949
2	653	714	711	e710	701	617	612	933	1220	e1280	1050	940
3	656	718	717	e710	703	596	622	912	1220	1290	1040	943
4	655	721	717	706	702	601	615	909	1220	1280	1040	928
5	658	732	720	701	692	600	608	910	1230	1280	1050	939
6	654	735	716	703	696	599	608	917	1180	1270	1050	947
7	652	737	716	703	708	596	614	927	1110	1270	1040	913
8	647	733	715	703	701	591	615	944	1110	1280	1040	842
9	642	e730	719	705	699	596	624	937	1120	1270	1040	845
10	643	e730	719	708	698	600	617	947	1170	1270	1040	824
11	660	e730	717	701	700	601	618	975	1210	1250	1050	789
12	661	e730	716	704	699	601	617	1020	1210	1210	1050	765
13	649	e730	734	716	704	599	615	1050	1220	1220	1050	725
14	647	e730	728	709	700	604	617	1110	1240	1230	1050	703
15	647	719	717	707	700	595	613	1200	1240	1220	1050	703
16	652	712	715	706	703	597	614	1230	1240	1190	1060	671
17	e650	708	711	697	705	596	613	1240	1230	1180	1050	638
18	e680	717	712	709	705	593	607	1230	1220	1160	1040	611
19	e700	716	707	715	707	594	611	1220	1210	1140	1040	596
20	702	713	709	718	707	595	675	1230	1210	1110	1040	567
21	710	712	702	718	705	591	647	1230	1210	1060	1040	563
22	716	713	702	718	706	601	623	1240	1200	1040	1040	567
23	719	713	701	718	708	610	617	1230	1200	1040	1020	563
24	723	714	701	720	710	609	667	1210	1210	1040	1000	561
25	714	714	700	724	709	611	735	1230	1200	1040	1000	558
26	719	714	700	724	712	611	751	1210	1230	1040	996	557
27	720	711	696	716	703	616	771	1210	1270	1060	994	550
28	720	710	699	705	679	605	812	1210	1280	1050	992	540
29	724	708	697	707	---	609	811	1210	1280	1050	993	533
30	728	709	697	704	---	612	863	1210	e1280	1060	995	523
31	735	---	699	703	---	610	---	1220	---	1050	967	---
TOTAL	21089	21596	22019	21997	19664	18699	19644	34202	36390	36210	31957	21353
MEAN	680	720	710	710	702	603	655	1103	1213	1168	1031	712
MAX	735	737	734	724	712	643	863	1240	1280	1290	1060	949
MIN	642	708	696	697	679	591	607	909	1110	1040	967	523
AC-FT	41830	42840	43670	43630	39000	37090	38960	67840	72180	71820	63390	42350

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2001, BY WATER YEAR (WY)

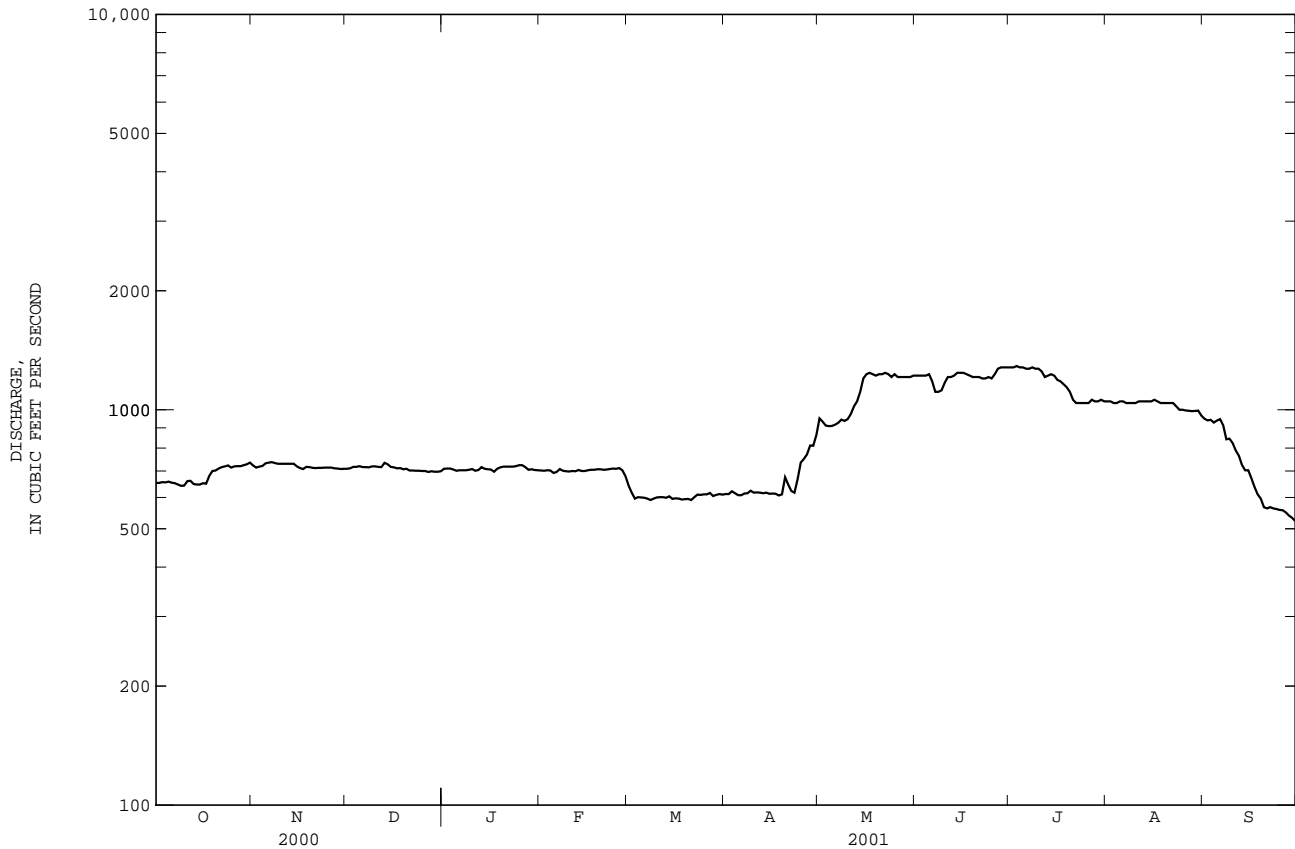
MEAN	1199	1169	1164	1098	1060	1142	1261	1504	2323	2524	1520	1303
MAX	2846	2086	2005	2208	2202	2035	2259	4314	7252	8816	2789	2502
(WY)	1983	1959	1959	1958	1958	1997	1998	1999	1991	1967	1997	1973
MIN	332	306	301	299	210	213	389	777	980	935	909	712
(WY)	1961	1978	1989	1989	1952	1952	1952	1952	1992	1992	1992	2001



06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1951 - 2001	
ANNUAL TOTAL	327729		304820		--	
ANNUAL MEAN	895		835		1429	
HIGHEST ANNUAL MEAN	--		--		2349	1983
LOWEST ANNUAL MEAN	--		--		612	1961
HIGHEST DAILY MEAN	1340	Jul 11-13	1290	Jul 3	13200	Jul 7 1967
LOWEST DAILY MEAN	642	Oct 9	523	Sep 30	4.7	Apr 3 1962
ANNUAL SEVEN-DAY MINIMUM	650	Oct 8	546	Sep 24	106	Oct 12 1951
MAXIMUM PEAK FLOW	--		1350	Jul 8	13500	Jul 7 1967
MAXIMUM PEAK STAGE	--		4.98	Jul 8	13.35	Jul 7 1967
ANNUAL RUNOFF (AC-FT)	650100		604600		1036000	
10 PERCENT EXCEEDS	1240		1220		2190	
50 PERCENT EXCEEDS	841		716		1160	
90 PERCENT EXCEEDS	701		609		665	

e Estimated.



## YELLOWSTONE RIVER BASIN

06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953-54, 1956, 1960-92, June to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE- SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	
JUN 06...	1210	1360	647	8.8	106	7.8	744	26.0	16.0	63.4	20.6	2.8	65.7	
JUL 17...	1215	1180	645	7.0	93	8.2	747	32.0	21.0	--	--	--	--	
AUG 21...	1305	1000	637	8.3	121	8.7	747	32.5	25.0	56.6	20.2	<.1	67.4	
SEP 20...	1250	--	650	8.7	110	8.3	781	23.0	18.5	--	--	--	--	

[illegible]

JUN	06...	175	7.9	.4	2.5	201	479	.32	.008	.001	<.007	.017	--	--
JUL	17...	--	--	--	--	--	--	.32	.035	.004	.007	.026	E3k	Elk
AUG	21...	165	8.9	.4	6.1	209	498	.70	<.005	<.001	E.006	.068	E3k	E4k
SEP	20...	--	--	--	--	--	--	.41	.093	.010	.065	.081	E2k	Elk

[illegible][illegible]

	2,6-DI-ETHYL ANILINE	ACETO-CHLOR,	ALA-CHLOR,	ALPHA BHC	ATRA-ZINE,	BEN-FLUR-ALIN	BUTYL-ATE,	CAR-BARYL WATER	CARBO-FURAN WATER	CHLOR-PYRIFOS	CYANA-ZINE,	DCPA WATER	DEETHYL ATRA-ZINE,
	WAT FLT	WATER	WATER,	BHC	WATER,	WAT FLD	WATER,	FLT RD	FLT RD	PYRIFOS	WATER,	FLT RD	WATER,
	0.7 U	FLT RD	DISS,	DIS-	DISS,	0.7 U	DISS,	0.7 U	0.7 U	DIS-	DISS,	0.7 U	DISS,
DATE	GF, REC	REC	REC,	SOLVED	REC	GF, REC	REC	GF, REC	GF, REC	SOLVED	REC	GF, REC	REC
	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
	(82660)	(49260)	(46342)	(34253)	(39632)	(82673)	(04028)	(82680)	(82674)	(38933)	(04041)	(82682)	(04040)

[illegible]

## 06259000 WIND RIVER BELOW BOYSEN RESERVOIR, WY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS-SOLVED (UG/L) (39341)	LIN-URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA-THION, DIS-SOLVED (UG/L) (39532)	METHYL-AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL-PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METHY-LENE BLUE ACTIVE SUB-STANCE (MG/L) (38260)
JUN 06...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.02
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	<.005	<.005	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.04
SEP 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	METRI-BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL-INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA-THION, DIS-SOLVED (UG/L) (39542)	PEB-ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI-METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER-METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (UG/L) (04024)
JUN 06...	<.013	<.006	<.002	<.007	E.001	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.004	<.004	<.010
SEP 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO-PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER-BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER-BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO-BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL-LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI-FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI-MENT, DIS-CHARGE, SUS-SUS- PENDEDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-SUS- PENDEDED (T/DAY) (80155)		
JUN 06...	<.011	<.023	<.011	E.005	<.034	<.017	<.005	<.002	<.009	47	173		
JUL 17...	--	--	--	--	--	--	--	--	--	8	25		
AUG 21...	<.011	<.023	<.011	<.016	<.034	<.017	<.005	<.002	<.009	4	11		
SEP 20...	--	--	--	--	--	--	--	--	--	2	--		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06259050 WIND RIVER AT WEDDING OF WATERS, NR THERMOPOLIS, WY

LOCATION.--Lat 43°33'48", long 108°12'46", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.8, T.7 N., R.6 W., Crook County, Hydrologic Unit 10080007, at the Wind River Indian Reservation boundary about 4.5 mi south of Thermopolis on U.S. Highway 20.

PERIOD OF RECORD.--July to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]

JUL	17...	1600	1070	649	7.6	105	8.5	733	36.0	23.0	--	--	--	--
AUG	21...	1000	941	652	8.0	104	8.4	753	24.0	20.0	57.2	20.6	<.1	64.8
SEP	20...	1100	630	654	6.0	75	8.0	780	20.0	18.5	--	--	--	--

[illegible]

JUL													
17...	--	--	--	--	--	--	.32	.021	<.001	.013	.028	E23k	E6k
AUG													
21...	170	9.2	.4	6.0	205	498	.50	.036	.002	.014	.046	E7k	E7k
SEP													
20...	--	--	--	--	--	--	.31	.105	.009	.043	.057	E3k	E4k

[illegible][illegible]

	2,6-DI-ETHYL ANILINE	ACETO-CHLOR,	ALA-CHLOR,	ALPHA	ATRA-ZINE,	BEN-FLUR-ALIN	BUTYL-ATE,	CAR-BARYL WATER	CARBO-FURAN WATER	CHLOR-PYRIFOS DIS-	CYANA-ZINE,	DCPA WATER,	DEETHYL ATRA-ZINE,
DATE	WAT FLT 0.7 U GF, REC (UG/L) (82660)	WATER FLT RD REC (UG/L) (49260)	WATER, DISS, REC, (UG/L) (46342)	BHC DIS- SOLVED (UG/L) (34253)	WATER, DISS, REC (UG/L) (39632)	WAT FLD 0.7 U GF, REC (UG/L) (82673)	WATER, DISS, REC (UG/L) (04028)	FLT RD 0.7 U GF, REC (UG/L) (82680)	FLT RD 0.7 U GF, REC (UG/L) (82674)	PYRIFOS DIS- SOLVED (UG/L) (38933)	WATER, DISS, REC (UG/L) (04041)	FLT RD 0.7 U GF, REC (UG/L) (82682)	WATER, DISS, REC (UG/L) (04040)

[illegible][illegible][illegible]

06259050 WIND RIVER AT WEDDING OF WATERS, NR THERMOPOLIS, WY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010
SEP 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)		
JUL 17...	--	--	--	--	--	--	--	--	--	24	69		
AUG 21...	<.011	<.023	<.011	E.004	<.034	<.017	<.005	<.002	<.009	4	10		
SEP 20...	--	--	--	--	--	--	--	--	--	1	1.7		

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06260300 ANCHOR RESERVOIR NEAR ANCHOR, WY

LOCATION.--Lat 43°39'50", long 108°49'27", in sec.26, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, at dam on South Fork Owl Creek, 2.0 mi downstream from Middle Fork, 3.0 mi southeast of Anchor, and 32 mi west of Thermopolis.

DRAINAGE AREA.--131 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum).

REVISED RECORDS.--WRD 1996: 1995(M).

REMARKS.--Reservoir is formed by concrete arch dam completed by Bureau of Reclamation in 1960. Capacity, 17,230 acre-ft below elevation 6,441.00 ft, crest of spillway. Includes 68 acre-ft below elevation 6,343.75 ft, invert of river outlet. Figures given herein represent total contents. Water used for irrigation of lands in Owl Creek basin.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 9,250 acre-ft, July 4, 1967, elevation, 6,418.52 ft; maximum elevation, 6,419.10 ft, June 12, 1991; no storage on many days, most years.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 1,060 acre-ft, May 6, elevation, 6,371.90 ft; minimum daily contents, 106 acre-feet, Nov. 24-25; elevation, 6,347.00 ft.

Capacity table (elevation in feet,  
and contents, in acre-feet)

6,352	191	6,372	1,050
6,362	492	6,382	1,920

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

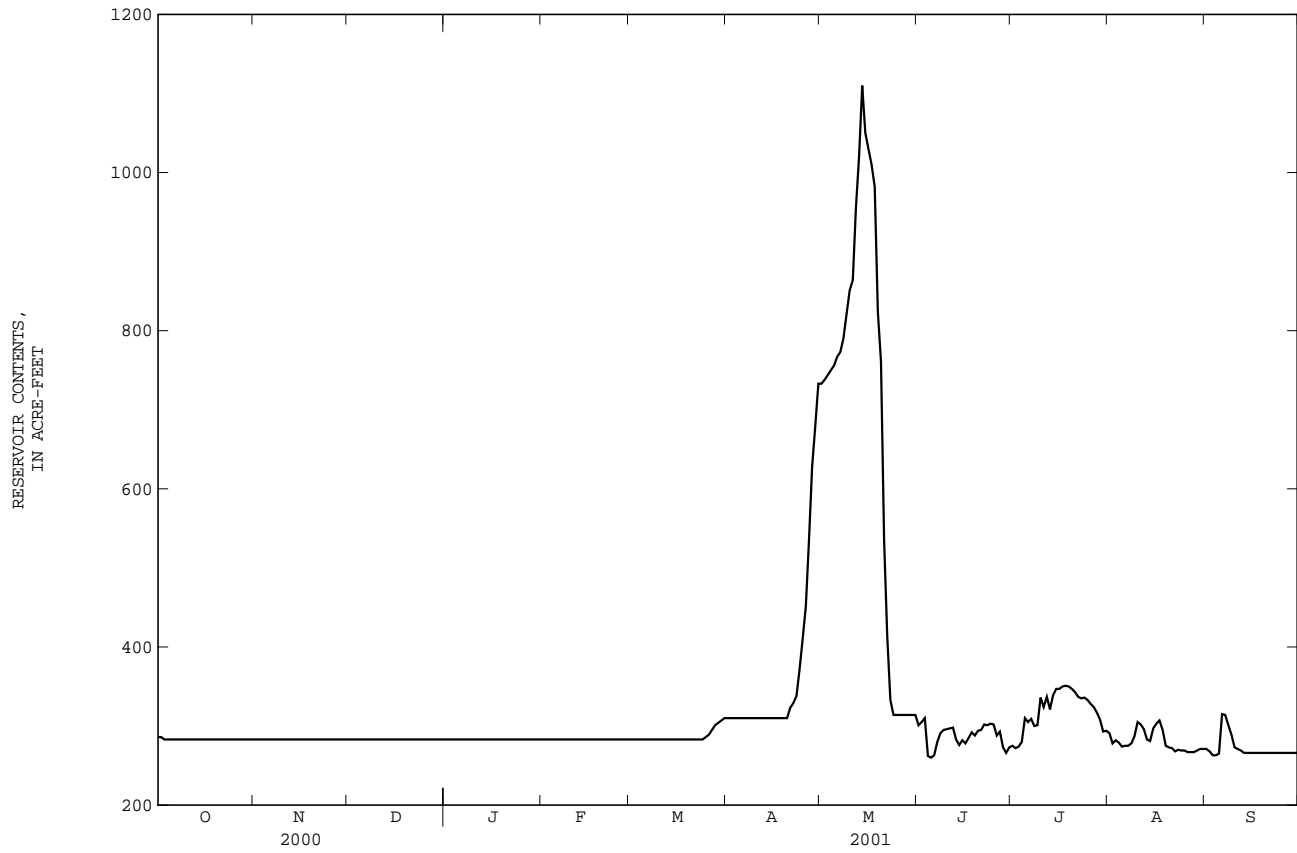
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	283	283	283	283	283	310	733	301	275	291	271
2	286	283	283	283	283	283	310	738	305	272	278	268
3	283	283	283	283	283	283	310	744	310	274	282	263
4	283	283	283	283	283	283	310	750	262	280	279	263
5	283	283	283	283	283	283	310	756	260	310	274	265
6	283	283	283	283	283	283	310	767	263	305	275	315
7	283	283	283	283	283	283	310	773	280	309	275	314
8	283	283	283	283	283	283	310	790	291	300	278	301
9	283	283	283	283	283	283	310	821	295	301	287	289
10	283	283	283	283	283	283	310	851	296	336	305	273
11	283	283	283	283	283	283	310	864	297	324	302	271
12	283	283	283	283	283	283	310	956	298	337	296	269
13	283	283	283	283	283	283	310	1020	283	321	283	266
14	283	283	283	283	283	283	310	1110	276	339	281	266
15	283	283	283	283	283	283	310	1050	282	347	297	266
16	283	283	283	283	283	283	310	1030	278	347	303	266
17	283	283	283	283	283	283	310	1010	285	350	307	266
18	283	283	283	283	283	283	310	982	292	351	295	266
19	283	283	283	283	283	283	310	824	288	350	275	266
20	283	283	283	283	283	283	310	761	294	347	273	266
21	283	283	283	283	283	283	323	535	295	343	272	266
22	283	283	283	283	283	283	329	414	302	337	268	266
23	283	283	283	283	283	283	338	333	301	335	270	266
24	283	283	283	283	283	283	372	314	303	336	269	266
25	283	283	283	283	283	286	411	314	302	333	269	266
26	283	283	283	283	283	289	452	314	288	328	267	266
27	283	283	283	283	283	295	535	314	293	324	267	266
28	283	283	283	283	283	301	628	314	273	317	267	266
29	283	283	283	283	---	304	679	314	266	308	269	266
30	283	283	283	283	---	307	733	314	273	293	271	266
31	283	---	283	283	---	310	---	314	---	294	271	---
MAX	286	283	283	283	283	310	733	1110	310	351	307	315
MIN	283	283	283	283	283	283	310	314	260	272	267	263
(#)	6,356.00	6,356.00	6,356.00	6,356.00	6,356.00	6,356.90	6,367.00	6,357.00	6,355.64	6,356.36	6,355.59	6,355.40
(*)	-3	0	0	0	0	+27	+23	-41	-41	+21	-23	-5

WTR YR 2001 MAX 1110 MIN 260 (\*) -20

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.

06260300 ANCHOR RESERVOIR NEAR ANCHOR, WY--Continued



## YELLOWSTONE RIVER BASIN

06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY

LOCATION.--Lat43°39'57", long 108°47'34", in sec.25, T.43 N., R.100 W., Hot Springs County, Hydrologic Unit 10080007, on left bank 1.6 mi downstream from Anchor Dam and 30 mi west of Thermopolis.

DRAINAGE AREA.--131 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1959 to current year (no winter records since 1988).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,120 ft above sea level, from topographic map.

REMARKS.--Records fair. Flow regulated by Anchor Dam (station 06260300). No diversion upstream from station. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 3 . . . 3.04  
Mar. 19 . . . 2.75

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.75	4.1	30	7.8	4.3	2.3
2	---	---	---	---	---	---	.84	4.6	34	6.5	4.1	2.1
3	---	---	---	---	---	---	.84	4.2	26	5.0	3.3	1.9
4	---	---	---	---	---	---	.70	3.8	18	4.4	3.2	1.8
5	---	---	---	---	---	---	.55	3.7	9.6	12	3.0	1.7
6	---	---	---	---	---	---	.50	3.9	8.6	17	2.6	4.1
7	---	---	---	---	---	---	.48	5.0	13	18	2.5	8.9
8	---	---	---	---	---	---	.47	4.8	19	15	3.0	7.4
9	---	---	---	---	---	---	.42	5.1	22	15	3.4	6.1
10	---	---	---	---	---	---	.35	5.2	24	31	4.9	4.8
11	---	---	---	---	---	---	.35	5.2	22	25	5.6	3.7
12	---	---	---	---	---	---	.50	9.4	19	24	5.4	3.6
13	---	---	---	---	---	---	.40	24	17	18	4.8	3.4
14	---	---	---	---	---	---	.33	42	13	13	4.1	4.3
15	---	---	---	---	---	---	.32	67	13	15	4.6	6.2
16	---	---	---	---	---	---	.32	62	13	20	5.5	5.2
17	---	---	---	---	---	---	.32	58	14	13	6.0	5.2
18	---	---	---	---	---	---	2.5	71	16	12	6.1	7.4
19	---	---	---	---	---	---	6.6	80	14	11	5.1	8.4
20	---	---	---	---	---	---	6.4	76	14	10	3.9	7.1
21	---	---	---	---	---	---	5.7	72	15	10	3.6	5.7
22	---	---	---	---	---	---	5.3	58	18	9.4	3.4	4.7
23	---	---	---	---	---	---	4.6	28	19	8.4	3.0	4.4
24	---	---	---	---	---	---	3.9	37	19	7.8	2.4	4.3
25	---	---	---	---	---	---	3.9	42	20	7.9	2.2	3.9
26	---	---	---	---	---	---	3.3	37	16	7.7	2.0	4.0
27	---	---	---	---	---	---	3.0	45	16	7.3	2.0	4.1
28	---	---	---	---	---	---	2.9	40	14	6.7	2.1	3.8
29	---	---	---	---	---	---	3.4	28	11	5.9	2.0	3.7
30	---	---	---	---	---	---	3.8	28	8.5	5.2	2.0	3.8
31	---	---	---	---	---	---	---	28	---	4.3	2.1	---
TOTAL	---	---	---	---	---	---	63.74	982.0	515.7	373.3	112.2	138.0
MEAN	---	---	---	---	---	---	2.12	31.7	17.2	12.0	3.62	4.60
MAX	---	---	---	---	---	---	6.6	80	34	31	6.1	8.9
MIN	---	---	---	---	---	---	.32	3.7	8.5	4.3	2.0	1.7
AC-FT	---	---	---	---	---	---	126	1950	1020	740	223	274

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2001, BY WATER YEAR (WY)\*

	MEAN	7.40	2.71	.98	.40	.71	2.06	8.61	48.2	98.2	57.0	26.0	12.9
MAX	20.5	8.90	3.86	2.39	2.82	8.66	30.2	90.1	226	124	79.4	37.1	
(WY)	1983	1982	1982	1981	1988	1960	1987	1974	1986	1982	1995	1992	
MIN	2.49	.013	.000	.000	.000	.000	.000	14.3	17.2	4.67	3.62	2.52	
(WY)	1965	1962	1961	1960	1960	1961	1991	1981	2001	1994	2001	2000	



06260400 SOUTH FORK OWL CREEK BELOW ANCHOR RESERVOIR, WY--Continued

## SUMMARY STATISTICS

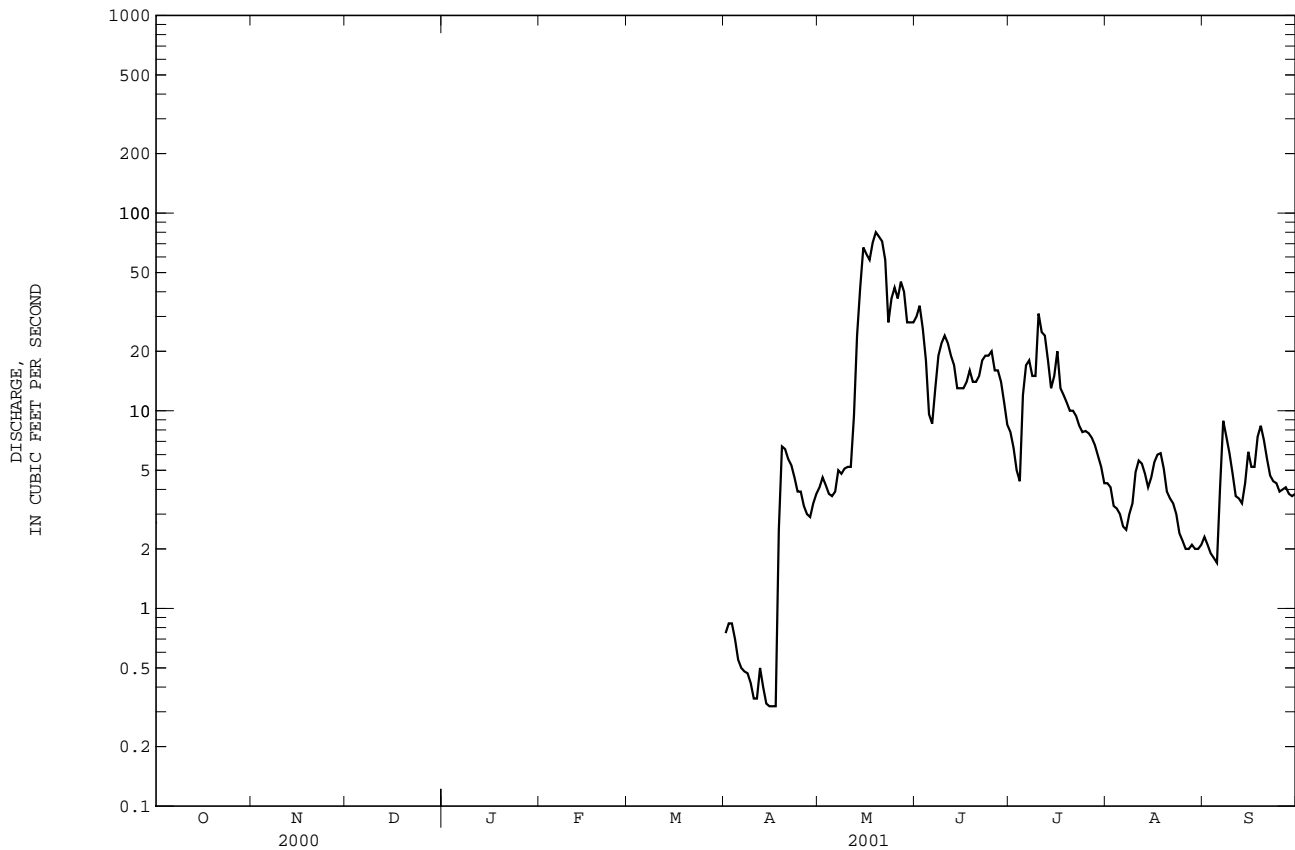
FOR 2001 WATER YEAR\*

WATER YEARS 1959 - 2001\*

ANNUAL MEAN	--		22.1	
HIGHEST ANNUAL MEAN	--		35.9	1986
LOWEST ANNUAL MEAN	--		11.3	1985
HIGHEST DAILY MEAN	80	May 19	357	Jun 18 1999
LOWEST DAILY MEAN	.32	Apr 15-17	.00	Several days,
				most years
MAXIMUM PEAK FLOW	86	May 18	373 <sup>a</sup>	May 26 1967
MAXIMUM PEAK STAGE	2.80	May 18	4.22	Jun 17 1999
ANNUAL RUNOFF (AC-FT)	--		16050	

\* For period of operation.

a Gage height, 3.64 ft.



## YELLOWSTONE RIVER BASIN

06264700 BIGHORN RIVER AT LUCERNE, WY

LOCATION.--Lat 43°44'10", long 108°09'38", in SE<sup>1</sup>/<sub>4</sub> sec.32, T.44 N., R.94 W., Hot Springs County, Hydrologic Unit 10080007, at bridge on Black Mountain road, 0.7 mi upstream from Kirby Creek, 0.8 mi east of Lucerne, and 1.0 mi downstream from Owl Creek.

PERIOD OF RECORD.--Water years 1966 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
DEC 27...	1020	736	658	12.3	101	7.9	758	1.5	1.0	<.041	<.047	<.006	<.018
FEB 27...	0945	805	662	11.1	95	8.1	784	-3.5	3.0	<.041	<.047	<.006	<.018
MAY 15...	1040	1090	648	8.3	98	8.2	803	29.0	15.5	<.040	E.025	<.006	.020
JUL 30...	1130	1180	651	10.8	146	8.3	831	25.5	22.0	E.024	E.042	<.006	<.020

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
DEC 27...	220	160
FEB 27...	200	200
MAY 15...	220	220
JUL 30...	29	35

E -- Estimated value.

06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY

LOCATION.--Lat 43°45'46", long 108°40'34", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.24, T.44 N., R.99 W., Hot Springs County, Hydrologic Unit 10080007, on right bank 15 ft upstream from county bridge, 5.2 miles west of Hamilton Dome, and 12 miles south of Grass Creek.

DRAINAGE AREA.--81.4 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1977 to September 1978 (discharge measurements and water quality only), April 1993 to current year. Prior to April 1993, published as Cottonwood Creek at county bridge, near Hamilton Dome.

GAGE.--Water-stage recorder. Elevation of gage is 5,677 ft above sea level, from topographic map. Prior to Sept. 9, 1996, at site 9 ft downstream at datum 3.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. State of Wyoming data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	2.1	.00	.00	.00	.00	1.9	7.2	1.6	.88	.00	.00
2	.00	e.90	.00	.00	.00	.00	2.2	5.7	1.2	.08	.00	.00
3	.00	.00	.00	.00	.00	.00	2.1	3.8	1.5	.00	.00	.00
4	.00	.00	e.00	.00	.00	e.01	2.5	2.6	3.1	.00	.00	.00
5	.00	.00	.00	.00	.00	e.01	2.0	3.4	2.8	.00	.00	.00
6	.00	e.00	.00	.00	.00	e.02	2.4	3.6	2.1	.00	.00	10
7	.00	e.00	.00	.00	.00	e.02	2.6	3.2	1.4	.00	.00	11
8	.00	e.00	.00	.00	.00	e.03	3.0	3.2	1.0	.00	.00	5.8
9	.00	e.00	.00	.00	.00	e.06	2.5	4.8	.63	.00	.00	4.4
10	.00	e.00	.00	.00	.00	e.10	2.2	6.0	.22	e310	.12	2.1
11	.00	e.00	.00	.00	.00	e.15	2.1	5.2	.00	12	.00	1.0
12	.00	e.00	.00	.00	.00	e.25	2.1	5.5	.00	4.2	.00	.39
13	.00	e.00	.00	.00	.00	e.40	2.3	5.7	7.6	6.7	.00	.15
14	.00	e.00	.00	.00	.00	e.60	2.1	6.4	10	14	.00	6.2
15	.00	e.00	.00	.00	.00	e1.0	2.1	5.8	6.6	12	.00	8.7
16	.00	e.00	.00	.00	.00	e1.5	2.1	4.8	3.8	6.3	.00	3.5
17	.00	e.00	.00	.00	.00	e2.5	2.2	4.3	2.6	3.2	.00	3.6
18	.00	e.00	.00	.00	.00	e3.0	3.4	3.3	2.3	1.7	.00	8.3
19	.00	e.00	.00	.00	.00	3.8	6.5	2.8	2.3	.67	.00	6.1
20	.00	e.00	.00	.00	.00	4.2	8.2	3.0	1.9	.09	.00	3.4
21	.00	e.00	.00	.00	.00	4.3	3.9	3.1	1.5	.00	.00	1.9
22	.00	e.00	.00	.00	.00	5.3	3.3	2.1	.93	.00	.00	1.1
23	.00	e.00	.00	.00	.00	5.4	2.7	1.9	.36	.00	.00	.68
24	.04	e.00	.00	.00	.00	4.9	3.0	1.4	.02	3.2	.00	.56
25	3.7	e.00	.00	.00	.00	3.2	4.2	1.6	.00	.00	.00	.31
26	3.8	e.00	.00	.00	.00	2.5	6.7	4.3	.00	.00	.00	.16
27	2.8	e.00	.00	.00	.00	2.3	9.6	7.5	.00	.00	.00	.24
28	1.7	e.00	.00	.00	.00	2.3	9.1	5.0	2.6	.00	.00	.21
29	1.3	e.00	.00	.00	---	2.6	9.4	3.2	2.5	.00	.00	.00
30	.89	.00	.00	.00	---	2.3	7.7	2.4	1.6	.00	.00	.10
31	2.1	---	.00	.00	---	2.1	---	2.1	---	.00	.00	---
TOTAL	16.33	3.00	0.00	0.00	0.00	54.85	116.1	124.9	62.16	375.02	0.12	79.90
MEAN	.53	.10	.000	.000	.000	1.77	3.87	4.03	2.07	12.1	.004	2.66
MAX	3.8	2.1	.00	.00	.00	5.4	9.6	7.5	10	310	.12	11
MIN	.00	.00	.00	.00	.00	.00	1.9	1.4	.00	.00	.00	.00
AC-FT	32	6.0	.00	.00	.00	109	230	248	123	744	.2	158

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	MEAN	5.19	2.92	1.28	1.03	1.54	7.66	12.3	38.4	51.5	14.7	4.83	3.95
MAX	14.7	6.91	2.96	2.83	3.30	26.9	30.2	84.1	142	30.6	8.95	9.11	
(WY)	1999	1994	1998	1997	1996	1998	1999	1999	1997	1997	1998	1998	
MIN	.53	.10	.000	.000	.000	1.77	3.87	4.03	2.07	1.01	.004	.000	
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2001	2000	

## YELLOWSTONE RIVER BASIN

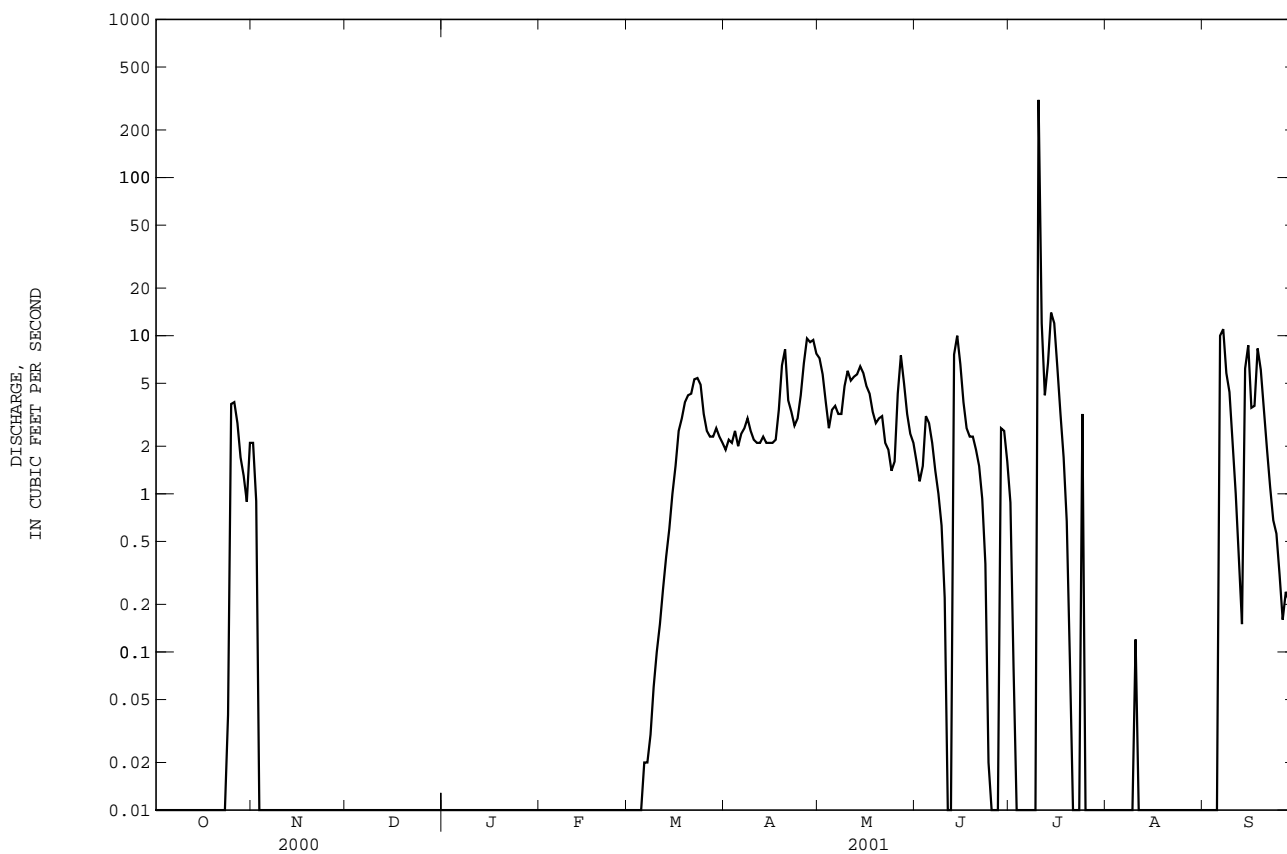
06265337 COTTONWOOD CREEK AT HIGH ISLAND RANCH, NEAR HAMILTON DOME, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1993 - 2001
ANNUAL TOTAL	1161.21	832.38	--
ANNUAL MEAN	3.17	2.28	11.7
HIGHEST ANNUAL MEAN	--	--	21.7
LOWEST ANNUAL MEAN	--	--	2.28
HIGHEST DAILY MEAN	38 May 24	310 Jul 10	895 Jun 11 1997
LOWEST DAILY MEAN	.00 Many days	.00 Many days	.00 Many days, most years
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 9	.00 Oct 1	.00 Most years
MAXIMUM PEAK FLOW	--	3410 <sup>a</sup> Jul 10	3410 <sup>a</sup> Jul 10 2001
MAXIMUM PEAK STAGE	--	10.76 <sup>b</sup> Jul 10	10.76 <sup>b</sup> Jul 10 2001
ANNUAL RUNOFF (AC-FT)	2300	1650	8480
10 PERCENT EXCEEDS	9.3	4.8	38
50 PERCENT EXCEEDS	.66	.00	3.6
90 PERCENT EXCEEDS	.00	.00	.00

a From rating curve extended above 1060 ft<sup>3</sup>/s on basis of slope-area determination of peak flow.

b From floodmarks.

e Estimated.



06274300 BIGHORN RIVER AT BASIN, WY

LOCATION.--Lat 44°23'00", long 108°02'08", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.21, T.51 N., R.93 W., Big Horn County, Hydrologic Unit 10080007, on left bank 10 ft downstream from county bridge on E Street, 0.2 mi northeast of Big Horn County Courthouse in Basin, and 1.8 mi downstream from Antelope Creek.

DRAINAGE AREA.--13,223 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,821.29 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 226,000 acres upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	999	1270	e1200	e1050	e1000	e940	914	798	982	710	463	552
2	1020	1260	e1150	e1000	e1000	e920	920	846	973	702	e450	552
3	1030	1260	e1150	e960	e1000	e920	917	832	1050	633	e435	577
4	1030	1250	e1200	e1000	e1020	e900	915	779	1170	612	e425	541
5	1020	1260	e1220	e1010	e1020	e940	918	697	1200	618	e415	445
6	1060	1260	e1150	e1020	e1020	e980	915	672	1090	597	e405	480
7	1140	1250	e1170	e1030	e1000	e1150	899	704	994	582	e400	1030
8	1090	e1250	e1200	e1050	e1000	e1300	902	662	860	595	e395	1060
9	1060	e1200	e1250	e960	e960	e1450	918	672	852	622	405	738
10	1130	e1100	e1000	e980	e850	e1450	887	817	944	675	424	659
11	1230	e1100	e900	e1000	e900	e1300	833	927	1010	1320	449	630
12	1200	e1050	e800	e1000	e940	e1150	791	980	1060	1290	520	599
13	1190	e1000	e700	e1020	e960	e1150	816	1300	1340	988	532	608
14	1180	e1000	e800	e1020	e1050	e1050	821	1730	1810	882	450	612
15	1190	e1050	e1100	e1030	e1000	e1000	775	2060	1840	911	415	604
16	1190	e1050	e1200	e1050	e960	999	780	1910	1400	993	439	633
17	1190	e1100	e1100	e960	e960	989	726	1700	1290	836	478	647
18	1190	e1100	e1200	e1000	e1000	999	683	1330	1230	727	503	606
19	1210	e1150	e1100	e1030	e1100	995	685	1090	1100	691	513	558
20	1240	e1200	e1000	e1050	e1050	998	683	998	987	637	542	503
21	1230	e1200	e980	e1030	e1050	1000	922	1070	897	638	511	517
22	1260	e1200	e1000	e1010	e1050	1000	991	845	838	595	498	485
23	1300	e1220	e1030	e1000	e1050	987	784	737	1000	579	502	476
24	1270	e1250	e1050	e1000	e1100	957	680	730	807	534	496	482
25	1330	e1250	e1100	e1020	e1150	943	604	853	827	512	484	477
26	1390	e1200	e1080	e1050	e1200	940	604	982	798	486	489	471
27	1300	e1200	e1080	e1070	e980	965	596	1210	844	519	501	474
28	1290	e1250	e1080	e1050	e960	960	563	1330	960	514	463	445
29	1290	e1200	e1060	e1000	---	946	603	1270	872	513	464	445
30	1270	e1250	e1050	e920	---	933	724	1240	756	502	478	461
31	1270	---	e1050	e960	---	918	---	1120	---	467	512	---
TOTAL	36789	35380	33150	31330	28330	32129	23769	32891	31781	21480	14456	17367
MEAN	1187	1179	1069	1011	1012	1036	792	1061	1059	693	466	579
MAX	1390	1270	1250	1070	1200	1450	991	2060	1840	1320	542	1060
MIN	999	1000	700	920	850	900	563	662	756	467	395	445
AC-FT	72970	70180	65750	62140	56190	63730	47150	65240	63040	42610	28670	34450

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

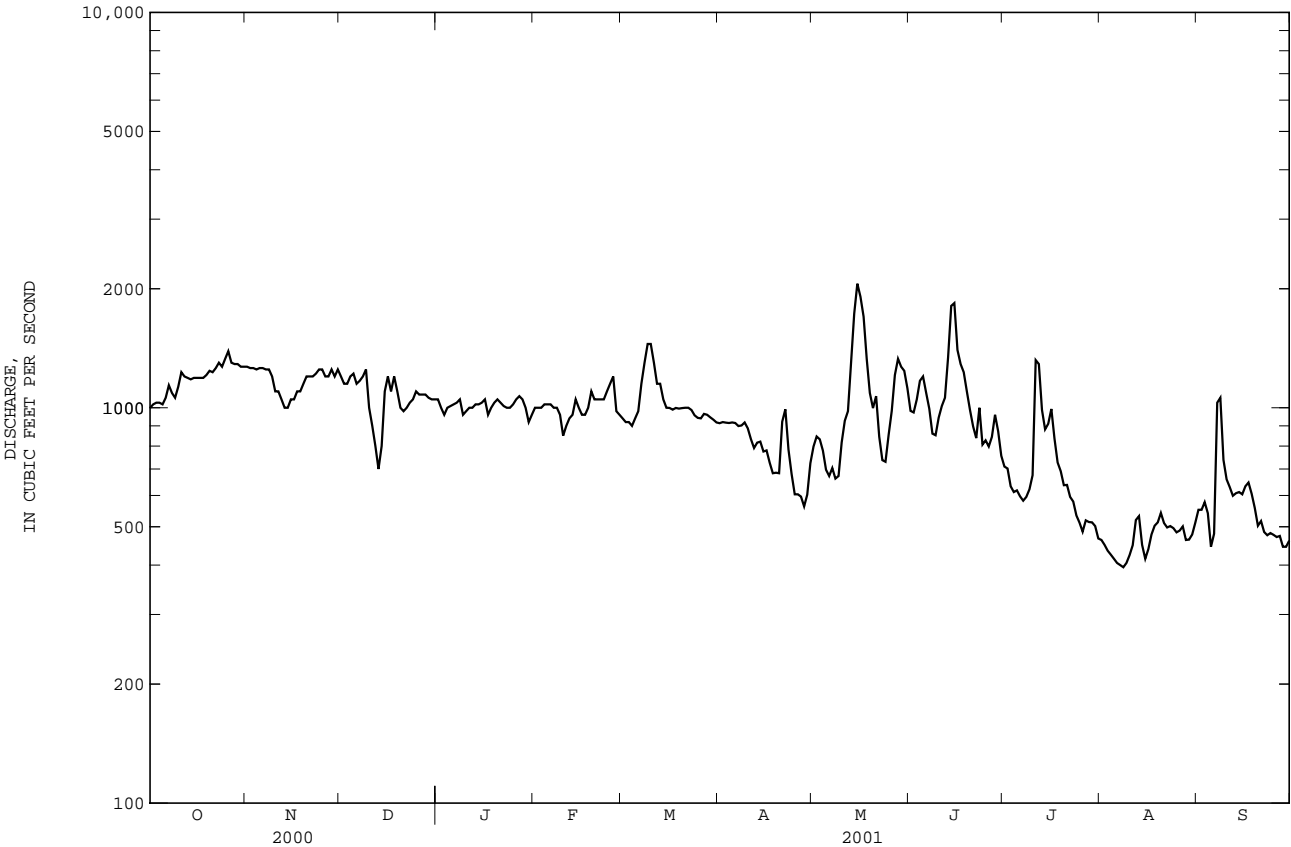
	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1565	1445	1324	1226	1278	1539	1459	2519	4075	2418	1182	1331						
MAX	2346	2439	1933	1975	1772	2753	2929	6252	11210	8574	2627	2326						
(WY)	1984	1984	1985	1992	1997	1998	1998	1999	1991	1995	1997	1998						
MIN	694	659	642	566	504	634	723	1052	1059	357	455	579						
(WY)	1989	1989	1989	1989	1989	1989	1992	1989	2001	1988	1988	2001						

YELLOWSTONE RIVER BASIN

06274300 BIGHORN RIVER AT BASIN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1984 - 2001	
ANNUAL TOTAL	417604		338852		--	
ANNUAL MEAN	1141		928		1781	
HIGHEST ANNUAL MEAN	--		--		2913	
LOWEST ANNUAL MEAN	--		--		800	
HIGHEST DAILY MEAN	3500	May 17	2060	May 15	16600	Jun 8 1991
LOWEST DAILY MEAN	568	Aug 29	395	Aug 8	276	Jul 27 1988
ANNUAL SEVEN-DAY MINIMUM	590	Aug 24	410	Aug 4	292	Jul 24 1988
MAXIMUM PEAK FLOW	--		2400	May 15	19500	Jun 7 1991
MAXIMUM PEAK STAGE	--		7.52	Nov 23	10.49	Jun 7 1991
ANNUAL RUNOFF (AC-FT)	828300		672100		1290000	
10 PERCENT EXCEEDS	1500		1250		2980	
50 PERCENT EXCEEDS	1130		988		1400	
90 PERCENT EXCEEDS	661		502		697	

e Estimated.



06274300 BIGHORN RIVER AT BASIN, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1983 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
DEC 27...	1515	1080	666	11.9	94	7.8	918	.00	.00	E.036	.266	<.006	<.018
FEB 27...	1410	924	--	8.0	--	8.1	883	26.0	.00	.047	.195	E.003	<.018
MAY 15...	1530	2280	659	8.0	91	7.7	344	29.0	14.5	<.040	.149	.007	<.020
JUL 30...	1430	523	660	11.4	157	8.4	1040	20.5	24.0	<.040	.533	.008	<.020

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
DEC 27...	E23k	21	83	242
FEB 27...	E1k	20	148	369
MAY 15...	1700	E1800k	2180	13400
JUL 30...	80	62	86	121

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06276500 GREYBULL RIVER AT MEETEETSE, WY

LOCATION.--Lat 44°09'20", long 108°52'35", in sec.4, T.48 N., R.100 W., Park County, Hydrologic Unit 10080009, on right bank at Meeteetse, 0.3 mi upstream from bridge on State Highway 120, and 3.0 mi upstream from Meeteetse Creek.

DRAINAGE AREA.--681 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June to December 1897, April to October 1903 (gage heights and discharge measurements only), July 1920 to current year (no winter records since 1971). Partial records only for some periods prior to 1931, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1923(M), 1924, 1925(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,739.42 ft above sea level. See WSP 1916 for history of changes prior to Apr. 28, 1938. Apr. 28, 1938 to May 24, 1961, at site on left bank at datum 2.00 ft higher. May 25, 1961, to May 9, 1967, at site 100 ft downstream at present datum.

REMARKS.--Records fair, except for Apr. 1-19 and June 24, 25, which are poor. Some regulation by Sunshine Reservoir beginning May 1940, capacity, 52,990 acre-ft, and Lower Sunshine Reservoir beginning December 1972, capacity, 58,900 acre-ft. Diversions for irrigation of about 10,600 acres upstream from station. Several diversions upstream from station for irrigation downstream from station. Results of discharge measurements, in cubic feet per second, made during the period when station was not in operation, are given below:

Oct. 10 . . . 81.0  
Mar. 29 . . . 64.3

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e47	163	394	382	278	109
2	---	---	---	---	---	---	45	121	426	369	258	95
3	---	---	---	---	---	---	50	84	367	351	255	61
4	---	---	---	---	---	---	56	78	301	349	264	28
5	---	---	---	---	---	---	55	88	252	373	277	23
6	---	---	---	---	---	---	57	111	231	408	269	113
7	---	---	---	---	---	---	54	106	238	422	254	228
8	---	---	---	---	---	---	52	138	279	422	245	137
9	---	---	---	---	---	---	51	234	357	451	237	113
10	---	---	---	---	---	---	43	266	410	599	234	96
11	---	---	---	---	---	---	47	234	402	564	223	85
12	---	---	---	---	---	---	48	308	391	491	219	80
13	---	---	---	---	---	---	51	364	411	463	216	80
14	---	---	---	---	---	---	51	576	221	438	218	89
15	---	---	---	---	---	---	47	505	176	417	219	104
16	---	---	---	---	---	---	50	408	163	406	220	100
17	---	---	---	---	---	---	49	192	186	384	206	105
18	---	---	---	---	---	---	58	207	212	367	196	118
19	---	---	---	---	---	---	61	174	213	363	190	114
20	---	---	---	---	---	---	61	226	245	368	189	108
21	---	---	---	---	---	---	57	129	291	361	187	103
22	---	---	---	---	---	---	54	100	360	348	186	99
23	---	---	---	---	---	---	52	110	413	333	178	98
24	---	---	---	---	---	---	52	208	429	330	171	97
25	---	---	---	---	---	---	54	278	461	326	165	97
26	---	---	---	---	---	---	69	330	447	322	155	102
27	---	---	---	---	---	---	122	416	495	317	142	100
28	---	---	---	---	---	---	132	361	455	302	129	95
29	---	---	---	---	---	---	125	276	408	303	123	92
30	---	---	---	---	---	---	130	266	382	304	98	96
31	---	---	---	---	---	---	---	307	---	303	112	---
TOTAL	---	---	---	---	---	---	1880	7364	10016	11936	6313	2965
MEAN	---	---	---	---	---	---	62.7	238	334	385	204	98.8
MAX	---	---	---	---	---	---	132	576	495	599	278	228
MIN	---	---	---	---	---	---	43	78	163	302	98	23
AC-FT	---	---	---	---	---	---	3730	14610	19870	23680	12520	5880

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2001, BY WATER YEAR (WY)\*

	MEAN	167	107	78.3	64.5	63.7	77.3	133	571	1157	803	493	270
MAX	593	248	134	105	104	117	441	1422	3185	2219	1704	662	
(WY)	1924	1942	1931	1943	1962	1942	1952	1924	1957	1965	1941	1941	
MIN	72.5	52.8	45.0	27.0	33.9	35.1	26.8	154	284	188	137	84.2	
(WY)	1956	1956	1970	1963	1960	1963	1978	1978	1934	1934	1940	1939	



SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

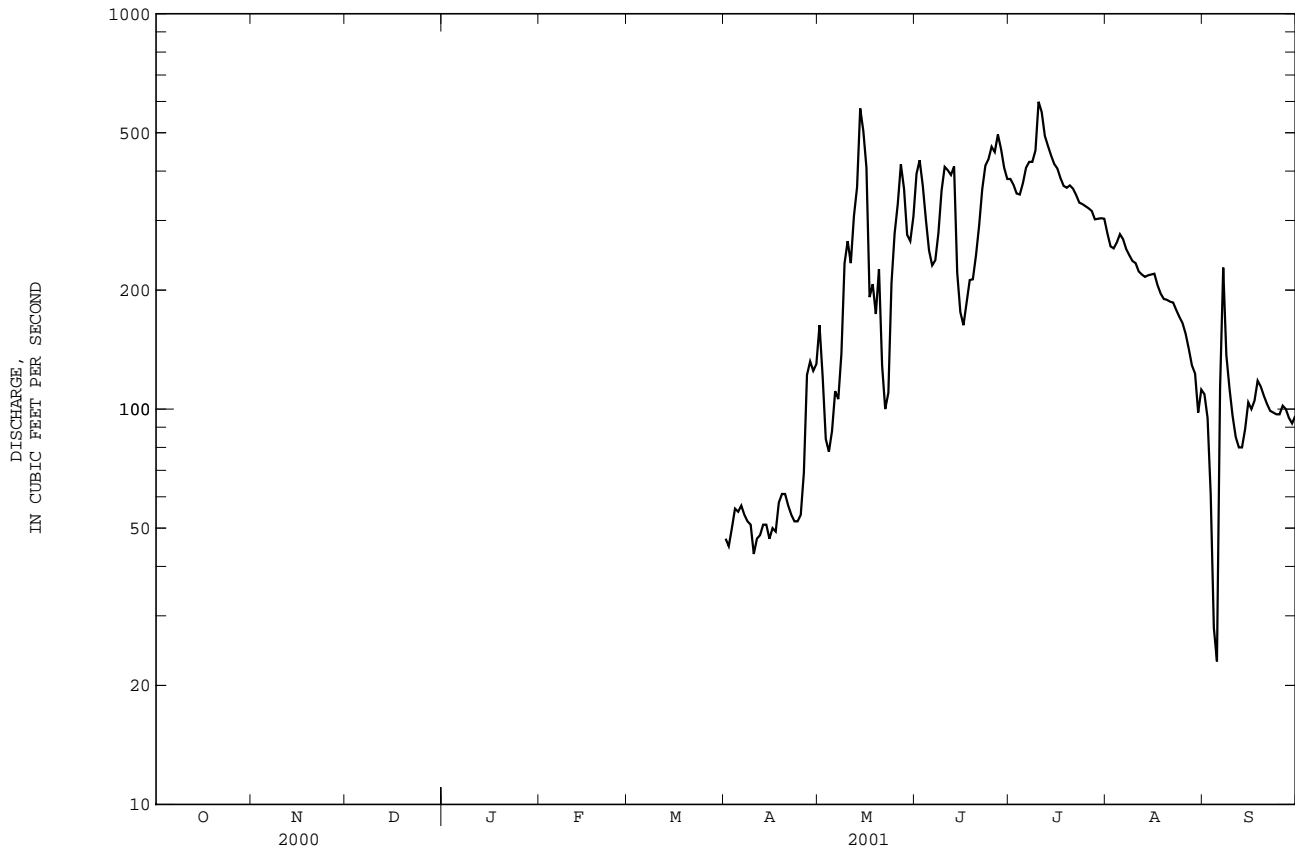
WATER YEARS 1921 - 2001\*

ANNUAL MEAN	--		333	
HIGHEST ANNUAL MEAN	--		566	1957
LOWEST ANNUAL MEAN	--		130	1940
HIGHEST DAILY MEAN	599	Jul 10	6770	Jun 6 1957
LOWEST DAILY MEAN	23	Sep 5	13	Apr 18 1989
MAXIMUM PEAK FLOW	839	Jul 10	13600 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	2.24	Jul 10	9.20 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		241200	

\* For period of operation.

a From rating curve extended above 4,600 ft<sup>3</sup>/s on basis of velocity-area study.

b From floodmark.



## YELLOWSTONE RIVER BASIN

06276500 GREYBULL RIVER AT MEETEETSE, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
DEC 19...	1215	33	615	13.6	116	8.1	661	9.5	.00	<1	E10k	50	4.5
MAR 01...	1145	40	--	10.2	--	7.9	617	5.0	.00	E2k	5	4	.43
MAY 16...	1750	302	614	8.4	105	8.3	154	20.0	15.5	55	85	68	55
JUL 31...	1640	290	618	7.8	109	8.9	498	28.0	21.0	31	40	39	31

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## 06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY

LOCATION.--Lat 44°30'29", long 107°24'11", in sec.1, T.52 N., R.88 W., Big Horn County, Hydrologic Unit 10080010, Bighorn National Forest, on right bank 0.2 mi upstream from Shell Reservoir, 1.1 mi downstream from Buckley Creek, 6.0 mi southeast of Shell Creek ranger station, and 19 mi east of Shell.

DRAINAGE AREA.--23.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1969, published as Shell Creek above Shell Creek Reservoir.

REVISED RECORD.--WSP 1629: 1958. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,050 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	4.7	3.0	2.4	1.8	1.9	e2.5	68	e80	20	5.0	2.4
2	7.8	4.4	2.9	2.4	1.8	1.9	e2.5	e50	e90	19	4.7	2.3
3	7.0	e4.2	2.8	2.4	1.9	1.9	e2.5	43	e100	18	4.5	2.2
4	6.4	e4.4	2.8	2.4	2.0	1.8	e2.6	33	e80	17	4.5	2.1
5	6.1	e4.6	2.6	2.4	2.0	1.8	e2.6	30	e60	16	4.3	2.0
6	5.6	e4.0	2.6	2.3	2.0	1.8	e2.6	29	e54	15	4.1	3.8
7	5.1	e3.7	2.7	2.1	2.1	1.8	e2.7	29	e50	14	3.9	5.0
8	5.3	e3.4	2.7	2.1	2.1	1.8	e2.8	31	e50	14	4.5	4.8
9	5.5	e3.6	2.6	1.9	2.0	1.8	e3.0	43	e64	14	4.2	4.6
10	5.4	e3.2	2.5	2.0	1.9	1.9	e2.9	69	e76	14	4.3	4.7
11	5.7	e3.0	2.5	2.0	1.9	1.8	e2.8	89	e72	13	3.9	4.1
12	e6.0	e2.9	2.5	2.1	1.9	1.9	e2.7	145	e66	13	4.0	3.7
13	e6.0	e2.9	2.4	2.0	1.9	1.9	e2.7	251	e70	12	3.9	3.6
14	e5.8	e2.9	2.3	2.0	1.9	2.0	e2.7	331	e60	11	3.8	4.9
15	5.6	e3.0	2.3	2.0	1.9	2.1	e2.6	330	e50	12	3.7	5.7
16	5.8	e2.8	2.3	1.9	1.9	2.1	e2.6	350	e45	12	4.1	5.0
17	e5.8	e2.8	2.4	1.9	1.9	2.0	e2.6	198	e40	11	4.6	4.7
18	e5.6	e2.7	2.5	1.9	1.9	2.0	e3.2	137	e36	10	3.9	4.6
19	5.5	e2.7	2.4	1.8	1.9	2.0	e4.3	125	e32	9.5	3.5	4.4
20	e5.3	e2.7	2.4	1.9	1.9	2.1	e5.4	133	30	8.9	3.3	4.5
21	5.1	e2.7	2.4	1.8	1.9	e2.1	e5.4	56	29	8.3	3.2	4.1
22	5.1	e2.7	2.4	1.8	1.9	e2.2	e4.5	42	28	7.9	3.1	3.9
23	e5.6	e2.7	2.4	1.8	1.9	e2.4	e4.0	55	29	7.6	3.0	3.8
24	5.4	e2.7	2.4	e1.8	1.9	2.2	e3.7	e100	30	11	2.9	3.7
25	5.9	2.7	2.4	e1.8	1.9	e2.2	e4.3	e130	32	8.4	2.7	3.6
26	5.8	2.7	2.2	e1.8	1.9	e2.3	e9.0	e160	30	7.7	2.8	3.5
27	e5.7	2.7	2.3	1.8	1.9	e2.5	e15	e180	30	7.3	2.7	3.4
28	5.6	2.8	2.4	1.8	1.9	e2.4	e30	e160	27	6.9	2.7	3.3
29	5.5	2.8	2.4	1.7	---	e2.3	e25	e130	23	6.3	2.7	3.2
30	5.2	2.9	2.4	1.7	---	e2.1	40	e110	21	5.6	2.5	3.2
31	5.0	---	2.4	1.6	---	e2.3	---	e90	---	5.3	2.5	---
TOTAL	178.2	96.0	77.3	61.3	53.8	63.3	199.2	3727	1484	355.7	113.5	114.8
MEAN	5.75	3.20	2.49	1.98	1.92	2.04	6.64	120	49.5	11.5	3.66	3.83
MAX	7.8	4.7	3.0	2.4	2.1	2.5	40	350	100	20	5.0	5.7
MIN	5.0	2.7	2.2	1.6	1.8	1.8	2.5	29	21	5.3	2.5	2.0
AC-FT	353	190	153	122	107	126	395	7390	2940	706	225	228

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	MEAN	8.51	5.80	3.80	2.72	2.25	2.15	5.66	105	204	48.0	13.1	9.74
MAX	17.6	11.2	7.18	4.50	3.67	3.76	28.4	289	353	188	45.6	44.9	
(WY)	1962	1962	1995	1995	1998	1999	1987	1958	1968	1975	1968	1968	
MIN	3.10	2.91	1.95	1.55	1.09	1.14	1.23	15.2	48.9	11.5	3.66	2.77	
(WY)	1989	1976	1970	1980	1980	1961	1970	1975	1994	2001	2001	1988	

## YELLOWSTONE RIVER BASIN

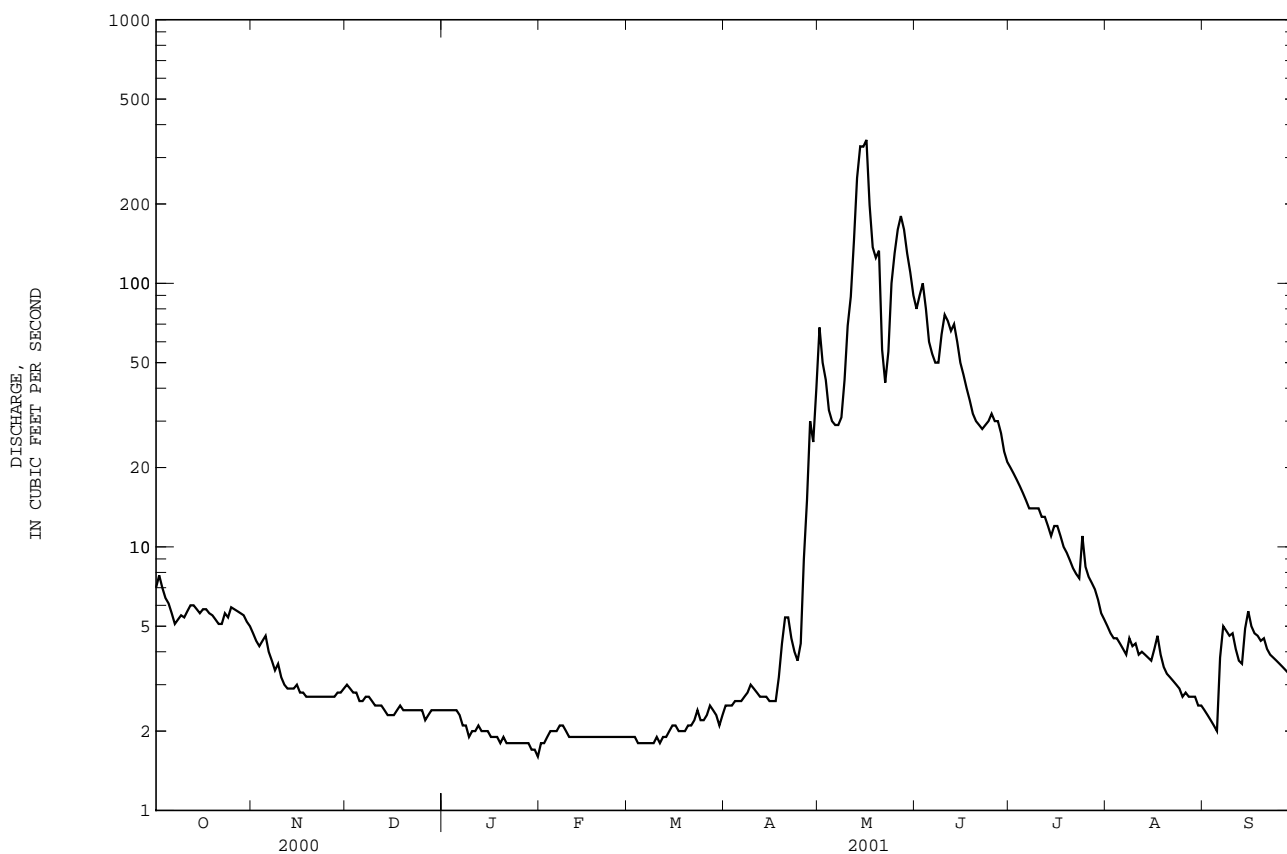
06278300 SHELL CREEK ABOVE SHELL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1957 - 2001	
ANNUAL TOTAL	10057.0		6524.1		--	
ANNUAL MEAN	27.5		17.9		34.2	
HIGHEST ANNUAL MEAN	--		--		50.2	
LOWEST ANNUAL MEAN	--		--		17.9	
HIGHEST DAILY MEAN	452	May 29	350	May 16	1010	Jun 15 1963
LOWEST DAILY MEAN	1.9	Mar 31	1.6	Jan 31	.60	Mar 7 1967
ANNUAL SEVEN-DAY MINIMUM	2.0	Mar 29	1.7	Jan 25	.90	Jan 27 1980
MAXIMUM PEAK FLOW	--		499		1870 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	--		4.99		7.84 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	19950		12940		24760	
10 PERCENT EXCEEDS	83		50		96	
50 PERCENT EXCEEDS	4.3		3.5		5.8	
90 PERCENT EXCEEDS	2.1		1.9		1.9	

a From rating curve extended above 725 ft<sup>3</sup>/s on basis of velocity-area study.

b From floodmarks.

e Estimated.



06278500 SHELL CREEK NEAR SHELL, WY

LOCATION.--Lat 44°33'54", long 107°42'44", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.17, T.53 N., R.90 W., Big Horn County, Hydrologic Unit 10080010, on right bank 0.9 mi upstream from White Creek and 5.0 mi northeast of Shell.

DRAINAGE AREA.--145 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year (no winter records since 1971). Prior to December 1940, monthly discharge only, published in WSP 1309.

REVISED RECORDS.--WSP 1239: 1941, 1945(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,370.05 ft above sea level.

REMARKS.--Records good. Some regulation by two small reservoirs, capacity, 3,650 acre-ft. Diversions upstream from station for irrigation of about 80 acres downstream from station. Results of discharge measurements, in cubic feet per second, made during the periods when station was not in operation, are given below:

Oct. 4 . . . 64.8  
Mar. 27 . . . 32.3

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	31	155	173	68	90	47
2	---	---	---	---	---	---	31	105	174	65	86	46
3	---	---	---	---	---	---	31	81	175	64	84	44
4	---	---	---	---	---	---	30	64	166	62	84	43
5	---	---	---	---	---	---	29	73	150	64	87	44
6	---	---	---	---	---	---	29	89	134	86	87	49
7	---	---	---	---	---	---	29	83	121	95	87	51
8	---	---	---	---	---	---	29	104	120	95	88	51
9	---	---	---	---	---	---	29	155	132	95	92	49
10	---	---	---	---	---	---	27	219	143	96	92	48
11	---	---	---	---	---	---	28	216	140	95	90	47
12	---	---	---	---	---	---	28	375	133	91	86	46
13	---	---	---	---	---	---	27	576	136	95	72	45
14	---	---	---	---	---	---	27	685	134	97	63	47
15	---	---	---	---	---	---	26	730	127	96	62	47
16	---	---	---	---	---	---	27	637	115	96	62	46
17	---	---	---	---	---	---	28	444	105	95	61	45
18	---	---	---	---	---	---	31	305	101	95	60	44
19	---	---	---	---	---	---	35	255	95	95	59	44
20	---	---	---	---	---	---	34	260	92	94	58	45
21	---	---	---	---	---	---	31	193	90	93	56	45
22	---	---	---	---	---	---	30	154	86	92	54	44
23	---	---	---	---	---	---	28	146	84	92	52	44
24	---	---	---	---	---	---	28	187	85	96	51	44
25	---	---	---	---	---	---	30	227	85	94	52	43
26	---	---	---	---	---	---	42	256	84	93	51	43
27	---	---	---	---	---	---	56	299	84	93	50	44
28	---	---	---	---	---	---	79	255	81	92	50	43
29	---	---	---	---	---	---	110	234	76	92	49	43
30	---	---	---	---	---	---	126	219	72	90	49	---
31	---	---	---	---	---	---	---	188	---	90	48	---
TOTAL	---	---	---	---	---	---	1146	7969	3493	2756	2112	1321
MEAN	---	---	---	---	---	---	38.2	257	116	88.9	68.1	45.6
MAX	---	---	---	---	---	---	126	730	175	97	92	51
MIN	---	---	---	---	---	---	26	64	72	62	48	43
AC-FT	---	---	---	---	---	---	2270	15810	6930	5470	4190	2620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)\*

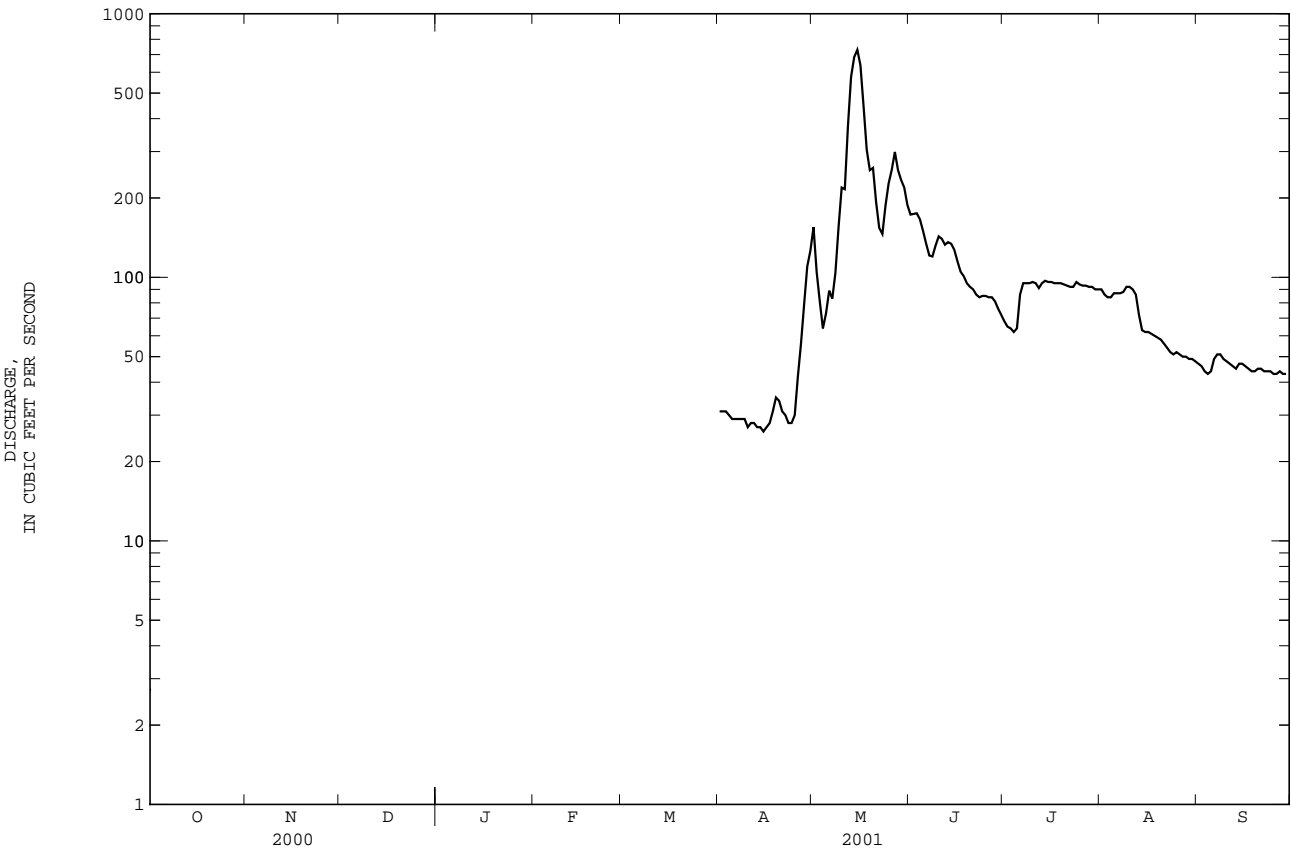
	MEAN	57.0	47.2	41.5	36.9	35.2	35.1	50.6	274	502	170	99.5	77.8
MAX	95.2	76.4	60.4	48.7	44.6	48.0	138	553	990	473	158	134	
(WY)	1942	1969	1969	1948	1947	1946	1946	1988	1968	1975	1979	1968	
MIN	35.3	31.5	30.0	28.3	26.9	25.9	29.0	80.4	116	69.2	57.7	36.0	
(WY)	1955	1955	1941	1967	1961	1961	1961	1995	2001	1961	1966	1954	

YELLOWSTONE RIVER BASIN

06278500 SHELL CREEK NEAR SHELL, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1941 - 2001*	
ANNUAL MEAN	--		119	
HIGHEST ANNUAL MEAN	--		160	1968
LOWEST ANNUAL MEAN	--		77.3	1966
HIGHEST DAILY MEAN	730	May 15	1980	Jun 4 1968
LOWEST DAILY MEAN	26	Apr 15	13	Apr 10 1989
MAXIMUM PEAK FLOW	910	May 15	3020 <sup>a</sup>	Jun 24 1945
MAXIMUM PEAK STAGE	4.72	May 15	7.49	Jun 24 1945
ANNUAL RUNOFF (AC-FT)	--		85900	

\* For period of operation.  
a From rating curve extended above 1,600 ft<sup>3</sup>/s.



## 06279500 BIGHORN RIVER AT KANE, WY

LOCATION.--Lat 44°45'31", long 108°10'51", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.9, T.55 N., R.94 W., Big Horn County, Hydrologic Unit 10080010, on right bank 180 ft upstream from Bighorn Canyon National Recreation Area boundary, 0.5 mi upstream from normal high-water line of Bighorn Lake at elevation 3,660 ft, 1.3 mi upstream from Five Springs Creek, and 5.9 mi south of Kane.

DRAINAGE AREA.--15,765 mi<sup>2</sup>. Area at sites used prior to May 17, 1956, 15,846 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1928 to current year.

REVISED RECORDS.--WSP 1309: 1929(M). WSP 1509: 1929. WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 3,660 ft above sea level, from topographic map. Aug. 29, 1928, to Apr. 25, 1932, nonrecording gage, and Apr. 25, 1932, to May 16, 1956, water-stage recorder at site 12.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by Boysen Reservoir (station 06258900) since October 1951. Diversions for irrigation of about 376,000 acres upstream from station. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station. Water-quality data are published in the special studies section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1923, 14.8 ft, Sept. 30, 1923, site and datum in use April 1932 to May 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1310	e1250	1200	1080	1210	1080	1010	1110	837	561	583
2	1170	1300	e1200	1150	1120	1170	1070	1030	1010	791	576	626
3	1180	1280	e1150	1150	1130	1150	1080	1060	1050	729	556	620
4	1180	1260	e1150	1110	1160	1150	1070	968	1190	664	555	636
5	1170	1260	e1200	1170	1160	1120	1070	868	1320	653	557	573
6	1200	1250	1260	1170	1160	1160	1070	792	1250	661	531	535
7	1250	e1200	1150	1180	1170	1190	1070	813	1140	641	488	857
8	1280	e1250	1160	1190	e1150	1250	1060	793	1010	634	431	1310
9	1220	e1200	e1200	1210	e1100	1380	1080	735	914	e640	447	966
10	1240	e1150	e1250	1090	e1000	1630	1070	809	945	e660	477	788
11	1280	e1100	e1200	1140	e950	1550	1040	1030	1040	e2000	491	753
12	1290	e1100	1110	1160	e1100	1450	959	1110	1090	e1900	521	715
13	1270	e1050	915	1170	e1150	1430	958	1470	1300	1160	615	688
14	1270	e1000	804	1170	e1200	1440	979	2150	2290	1010	568	720
15	1260	e1000	964	1180	e1250	1340	981	2600	2510	965	490	716
16	1260	e1050	e1100	1170	e1200	1280	966	2560	1890	1120	485	728
17	1250	e1050	e1200	1210	1160	1270	922	2280	1540	1040	533	737
18	1240	e1100	1120	1070	1160	1300	911	1770	1450	911	560	739
19	1240	e1100	1200	1140	1190	1320	877	1360	1320	819	576	679
20	1270	e1150	e1200	1150	1290	1340	893	1150	1170	788	607	634
21	1270	e1200	e1150	1190	1240	1340	996	1210	1060	766	609	609
22	1290	e1200	1080	1170	1240	1300	1260	1070	944	771	579	607
23	1330	e1200	1080	1170	1260	1210	1100	839	1030	737	562	572
24	1310	e1250	1090	1180	1260	1160	935	749	919	672	561	567
25	1340	e1250	1140	1150	1260	1120	845	801	910	622	555	562
26	1480	e1250	1170	1170	1320	1100	765	965	869	585	547	557
27	1370	e1200	1140	1210	1300	1130	795	1230	1190	578	559	567
28	1330	e1200	1140	1220	1260	1140	757	1460	1020	595	549	554
29	1330	e1250	1150	1200	---	1120	801	1420	1100	606	519	538
30	1320	e1200	1140	1080	---	1120	911	1350	938	601	530	543
31	1310	---	1150	1030	---	1100	---	1260	---	582	555	---
TOTAL	39340	35360	35213	35950	33020	38970	29371	38712	36519	25738	16750	20279
MEAN	1269	1179	1136	1160	1179	1257	979	1249	1217	830	540	676
MAX	1480	1310	1260	1220	1320	1630	1260	2600	2510	2000	615	1310
MIN	1140	1000	804	1030	950	1100	757	735	869	578	431	535
AC-FT	78030	70140	69840	71310	65500	77300	58260	76790	72440	51050	33220	40220

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

	MEAN	1818	1685	1469	1377	1548	1836	1824	3205	5858	3180	1458	1536
MAX	3994	2871	2506	2871	3164	3171	3454	7505	14680	11650	6388	3673	
(WY)	1983	1984	1983	1972	1983	1972	1943	1947	1944	1967	1930	1973	
MIN	524	737	627	580	550	740	696	1005	1032	501	305	386	
(WY)	1936	1961	1961	1937	1933	1989	1961	1960	1934	1961	1940	1935	

YELLOWSTONE RIVER BASIN

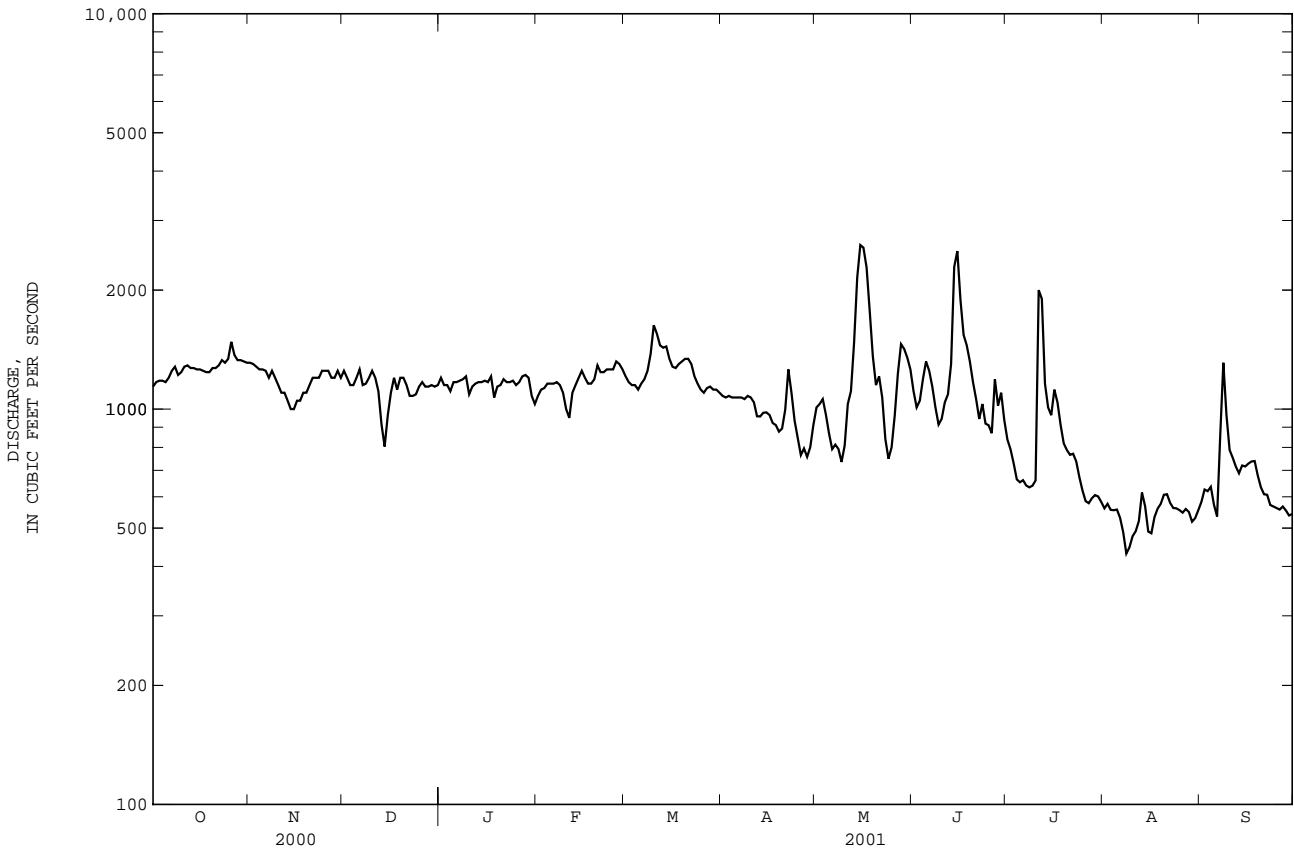
06279500 BIGHORN RIVER AT KANE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1930 - 2001*	
ANNUAL TOTAL	482157		385222		--	
ANNUAL MEAN	1317		1055		2233	
HIGHEST ANNUAL MEAN	--		--		3524	1947
LOWEST ANNUAL MEAN	--		--		915	1989
HIGHEST DAILY MEAN	4280	May 18	2600	May 15	24800	Jun 15 1935
LOWEST DAILY MEAN	625	Aug 30	431	Aug 8	179	Jul 22 1934
ANNUAL SEVEN-DAY MINIMUM	657	Aug 25	484	Aug 6	184	Jul 18 1934
MAXIMUM PEAK FLOW	--		3140	Jun 14	25200 <sup>a</sup>	Jun 16 1935
MAXIMUM PEAK STAGE	--		3.52	Jun 14	11.10 <sup>a</sup>	Jun 16 1935
ANNUAL RUNOFF (AC-FT)	956400		764100		1618000	
10 PERCENT EXCEEDS	1760		1320		4000	
50 PERCENT EXCEEDS	1250		1120		1650	
90 PERCENT EXCEEDS	746		576		796	

\* August 1928 to September 1929 not included in computations, monthly only for select months.

a Site and datum then in use.

e Estimated.





06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY

LOCATION.--Lat 44°30'48", long 109°58'22", Park County, Hydrologic Unit 10080012, Shoshone National Forest, on right bank 0.3 mi upstream from mouth and 0.8 mi northwest of Pahaska.

DRAINAGE AREA.--19.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March to September 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,760 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e6.2	70	105	43	12	8.3
2	---	---	---	---	---	---	e6.0	52	105	40	11	8.1
3	---	---	---	---	---	---	e5.8	49	110	36	11	8.1
4	---	---	---	---	---	---	e5.8	63	102	34	11	8.0
5	---	---	---	---	---	---	e5.6	82	88	32	11	8.2
6	---	---	---	---	---	---	e5.6	88	82	31	11	9.7
7	---	---	---	---	---	---	e6.0	91	74	29	11	8.9
8	---	---	---	---	---	---	e6.0	117	74	33	10	8.5
9	---	---	---	---	---	---	e5.6	138	77	31	10	8.3
10	---	---	---	---	---	---	e5.4	137	83	30	10	8.1
11	---	---	---	---	---	---	e5.2	140	84	25	10	8.0
12	---	---	---	---	---	---	e5.1	141	88	23	10	8.0
13	---	---	---	---	---	---	e4.8	165	84	22	9.7	8.0
14	---	---	---	---	---	---	e5.2	161	77	22	9.7	8.6
15	---	---	---	---	---	---	e5.2	156	72	23	9.6	8.2
16	---	---	---	---	---	---	e6.0	172	68	20	9.4	7.8
17	---	---	---	---	---	---	e9.0	123	65	19	9.2	7.8
18	---	---	---	---	---	---	e11	104	63	19	9.1	7.7
19	---	---	---	---	---	---	9.4	102	63	18	9.0	7.6
20	---	---	---	---	---	e5.6	9.4	105	62	17	8.9	7.4
21	---	---	---	---	---	e5.6	9.2	94	62	16	8.9	7.3
22	---	---	---	---	---	e5.6	9.4	90	63	15	8.8	7.3
23	---	---	---	---	---	e6.0	9.7	95	69	15	8.8	7.3
24	---	---	---	---	---	e6.4	10	98	70	14	8.7	7.3
25	---	---	---	---	---	e6.2	11	98	67	14	8.6	7.2
26	---	---	---	---	---	e5.8	16	103	62	14	8.5	7.1
27	---	---	---	---	---	e6.0	35	100	56	13	8.5	7.1
28	---	---	---	---	---	e6.2	60	96	52	13	8.4	7.0
29	---	---	---	---	---	e6.2	69	97	48	12	8.4	7.0
30	---	---	---	---	---	e6.0	58	101	46	12	8.3	6.9
31	---	---	---	---	---	e5.8	---	104	---	12	8.3	---
TOTAL	---	---	---	---	---	---	415.6	3332	2221	697	296.8	234.8
MEAN	---	---	---	---	---	---	13.9	107	74.0	22.5	9.57	7.83
MAX	---	---	---	---	---	---	69	172	110	43	12	9.7
MIN	---	---	---	---	---	---	4.8	49	46	12	8.3	6.9
AC-FT	---	---	---	---	---	---	824	6610	4410	1380	589	466

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)\*

MEAN	---	---	---	---	---	---	13.0	63.9	110	52.1	18.3	11.6
MAX	---	---	---	---	---	---	18.5	107	155	80.9	30.7	16.3
(WY)	---	---	---	---	---	---	1990	2001	1991	1993	1993	1993
MIN	---	---	---	---	---	---	6.49	36.0	59.8	22.5	9.57	7.83
(WY)	---	---	---	---	---	---	1991	1990	1992	2001	2001	2001

## YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, AT PAHASKA, WY--Continued

## SUMMARY STATISTICS

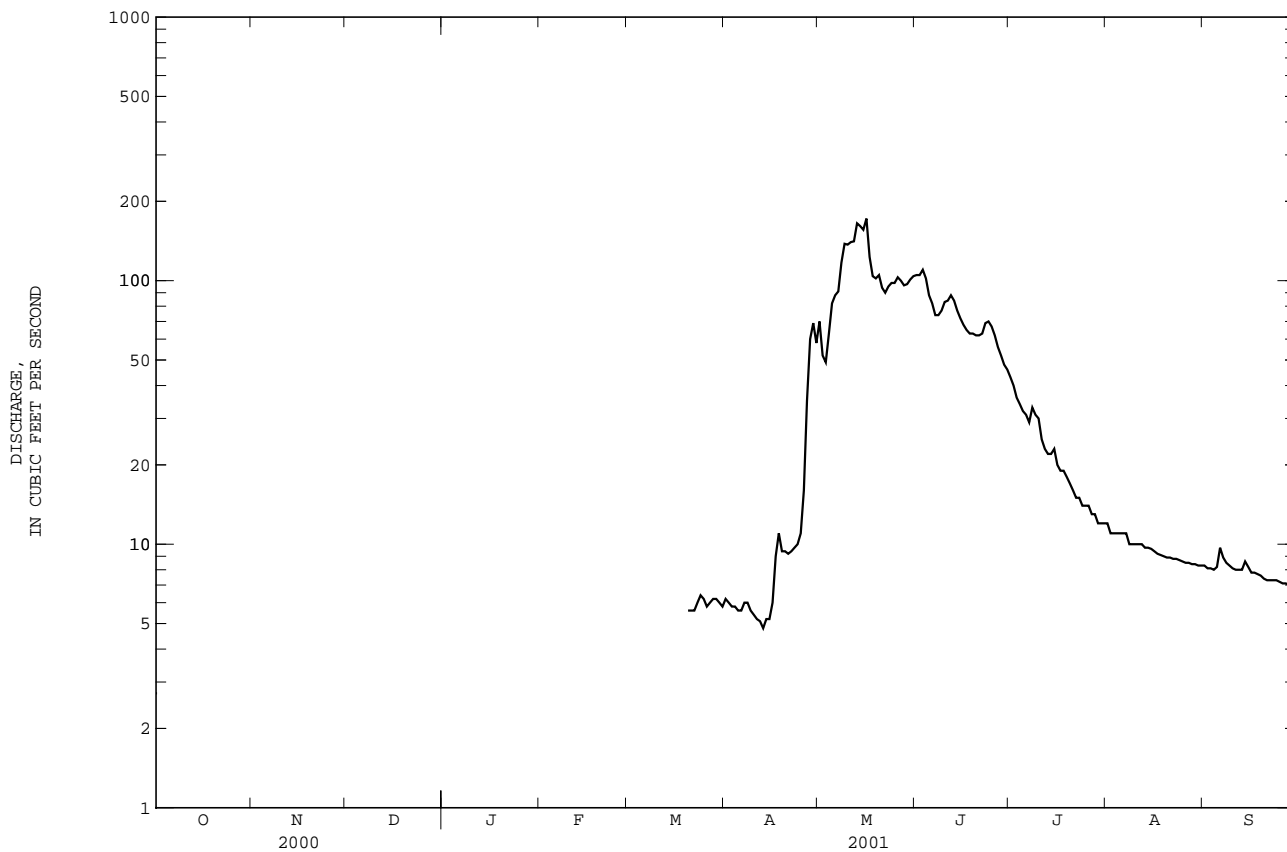
FOR 2001 WATER YEAR\*

WATER YEARS 1989 - 2001\*

HIGHEST DAILY MEAN	172	May 16	259	Jun 12 1991
LOWEST DAILY MEAN	4.8 <sup>e</sup>	Apr 13	3.7	Mar 20-22 1993
MAXIMUM PEAK FLOW	236	May 13	324	Jun 12 1991
MAXIMUM PEAK STAGE	2.23	May 13	2.74	Jun 12 1991

\* For period of operation.

e Estimated.



06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1989 to September 1993, March to September 2001 (no winter records).

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1989 to September 1993, March to September 2001 (no winter records).

PH: June 1989 to September 1993, March to September 2001 (no winter records).

WATER TEMPERATURE: July 1989 to September 1993, March to September 2001 (no winter records).

DISSOLVED OXYGEN: March to September 2001 (no winter records).

SUSPENDED-SEDIMENT DISCHARGE: March 1989 to September 1993, March to September 2001 (no winter records).

INSTRUMENTATION: Water-quality monitor and sediment pumping sampler.

REMARKS.--Water-temperature records represent water temperature at sensor within 0.2°C.

## EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily mean, 112 microsiemens, May 5, 1990; minimum daily mean, 30 microsiemens, May 30, 1990.

PH: Maximum, 9.2, July 17, 1991; minimum, 6.5, July 22, 1992.

WATER TEMPERATURE: Maximum, 14.9°C, August 8, 1990; minimum, 0.0°C, on many days during March and April most years.

DISSOLVED OXYGEN: Maximum daily mean 11.9 mg/L, June 13, 2001; minimum daily mean, 8.1 mg/L, July 25, 2001.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 204 mg/L, June 25, 1992; minimum daily mean, 0.0 mg/L, September 27-30, 1989.

SEDIMENT LOADS: Maximum daily, 118 tons, June 12, 1991; minimum daily, 0 tons, September 27-30, 1989 and March 20 to April 25, June 26, 27, July 4-7, August 2-4, 6-11, July 14 to September 5, and September 8-30, 2001.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily mean during period of operation, 92 microsiemens, Sept. 10, 11, 13; minimum daily mean during period of operation, 38 microsiemens, May 9.

PH: Maximum during period of operation, 8.5, Sept. 5; minimum during period of operation, 7.4, May 12-16 and May 30 to June 1.

DISSOLVED OXYGEN: Maximum daily mean during period of operation, 11.9 mg/L, June 13; minimum during period of operation, 8.1 mg/L, July 25.

WATER TEMPERATURE: Maximum during period of operation, 14.4°C, Aug. 6, minimum during period of operation, 0.0°C, Apr. 11.

SEDIMENT CONCENTRATIONS: Maximum daily mean during period of operation, 180 mg/L, July 10; minimum daily mean during period of operation, 1 mg/L, Apr. 3-5, 7, 8, 10-12, 14, 16, 19-23.

SEDIMENT LOADS: Maximum daily during period of operation, 32 tons, May 13; minimum daily during period of operation, 0.0 tons, Mar. 20 to Apr. 25, June 26, 27, July 4-7, Aug. 2-4, 6-11, July 14 to Sept. 5, and Sept. 8-30.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	SODIUM, DIS-SOLVED (MG/L AS NA)	
		(00061)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00915)	(00925)	(00935)	(00930)	
MAR														
20...	1700	5.6	594	10.9	97	8.0	88	4.0	.5	7.00	1.92	.69	9.3	
APR														
12...	1800	5.1	590	10.3	95	8.1	92	1.0	1.5	--	--	--	--	
19...	1500	9.3	589	9.2	87	8.1	86	2.0	2.5	--	--	--	--	
MAY														
08...	1500	116	599	9.6	97	7.8	62	17.5	5.5	5.79	1.60	.63	4.9	
17...	1500	118	599	9.6	100	7.9	46	17.0	6.5	4.15	1.17	.57	3.7	
29...	1400	98	594	9.7	102	7.5	46	21.0	6.7	3.82	1.01	.41	4.0	
JUN														
05...	1800	79	595	10.6	111	7.7	43	16.0	6.5	4.53	1.23	.45	4.4	
22...	1330	60	599	9.7	107	7.9	53	28.0	9.0	4.26	1.16	.45	4.2	
JUL														
18...	1600	18	598	8.9	105	7.8	71	20.0	11.6	6.13	1.66	.63	6.9	
AUG														
15...	1700	9.6	597	8.6	100	8.1	85	26.0	11.2	6.57	1.85	.73	7.8	
SEP														
05...	1600	7.9	595	--	--	8.0	86	24.0	9.5	6.90	1.94	.77	8.3	
DATE		CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
		(00940)	(00950)	(00955)	(00945)	(70303)	(70302)	(70300)	(70301)	(00608)	(00623)	(00625)	(00631)	(00613)
MAR														
20...	.7	E.1	24.2	3.4	.11	1.19	79	74	<.041	<.10	.11	.056	<.006	
APR														
12...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	<.041	E.07	.12	E.025	<.006	
MAY														
08...	.5	<.2	21.5	3.2	.08	19.4	62	56	<.041	E.09	E.06	E.041	E.003	
17...	.3	<.2	18.3	1.8	.08	17.8	56	45	<.040	E.05	.10	.102	<.006	
29...	.3	E.1	16.9	1.8	.07	13.0	49	42	<.040	E.06	.10	<.050	<.006	
JUN														
05...	.3	<.2	19.2	1.9	.08	11.9	56	47	<.040	<.10	E.07	<.050	<.006	
22...	.2	E.2	17.5	1.8	.07	8.94	55	45	E.022	<.10	.09	<.050	E.003	
JUL														
18...	.3	E.1	22.8	2.9	.08	3.10	62	62	<.040	<.10	.11	<.050	E.004	
AUG														
15...	.3	E.1	24.7	3.2	.09	1.68	65	70	<.040	E.05	.10	E.025	<.006	
SEP														
05...	.4	E.1	25.9	3.4	.10	1.58	74	73	<.040	<.10	E.08	<.050	<.006	

## YELLOWSTONE RIVER BASIN

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)
MAR 20...	.063	.056	.068	2.6	4	E.03	.7	3.3	<.06	21	<.04	<.8	.02
APR 12...	--	--	--	1.1	--	--	--	--	--	--	--	--	--
19...	.058	.047	.067	--	--	--	--	--	--	--	--	--	--
MAY 08...	.050	.038	.049	3.1	10	E.05	.5	3.9	<.06	8	<.04	E.5	.03
17...	.037	.038	.061	--	--	--	--	--	--	--	--	--	--
29...	.029	.021	.037	--	--	--	--	--	--	--	--	--	--
JUN 05...	.032	.024	.042	--	8	E.04	.4	3.2	<.06	14	<.04	<.8	.02
22...	.031	.023	.037	--	--	--	--	--	--	--	--	--	--
JUL 18...	.045	.040	.064	2.1	5	<.05	.6	4.7	<.06	16	<.04	E.5	.02
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 15...	.048	.047	.057	1.4	4	.14	3.9	4.7	<.06	219	E.04	E.5	.56
SEP 05...	.053	.043	.060	2.1	4	.05	.6	3.8	<.06	18	.05	E.4	.02

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
MAR 20...	.5	M	<.08	.5	.6	1.2	.12	<.3	<1.0	38.7	<.04	5.5	<1
APR 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	1.7	M	.12	.8	.6	.4	.16	<.3	<1.0	40.3	<.04	3.7	1
17...	--	10	--	--	<3.0	--	--	--	--	--	--	--	--
29...	--	M	--	--	<3.0	--	--	--	--	--	--	--	--
JUN 05...	.4	<10	<.08	.9	.3	.3	.16	<.3	<1.0	32.4	<.04	3.4	1
22...	--	M	--	--	<3.0	--	--	--	--	--	--	--	--
JUL 18...	.4	<10	<.08	.5	1.3	.6	E.04	<.3	<1.0	43.8	<.04	4.8	2
AUG 15...	4.1	M	E.05	10.7	.8	10.1	E.05	1.3	<1.0	46.1	<.04	7.2	2
SEP 05...	.7	<10	E.06	.6	.6	.8	<.06	<.3	<1.0	42.0	<.04	4.6	2

URANIUM  
NATURAL  
DIS-  
SOLVED  
(UG/L  
AS U)  
(22703)

MAR 20...	.08
APR 12...	--
19...	--
MAY 08...	E.01
17...	--
29...	--
JUN 05...	E.02
22...	--
JUL 18...	.03
AUG 15...	3.63
SEP 05...	.03

E -- Estimated value.

M -- Presence verified, not quantified.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	90	89	89	69	59	65
2	---	---	---	---	---	---	89	88	89	69	69	69
3	---	---	---	---	---	---	90	88	89	69	59	69
4	---	---	---	---	---	---	88	87	88	69	59	60
5	---	---	---	---	---	---	89	88	88	69	49	61
6	---	---	---	---	---	---	89	88	89	59	49	57
7	---	---	---	---	---	---	89	88	89	59	49	59
8	---	---	---	---	---	---	89	88	89	62	46	56
9	---	---	---	---	---	---	90	89	90	60	38	52
10	---	---	---	---	---	---	91	90	90	45	41	43
11	---	---	---	---	---	---	93	89	90	50	41	46
12	---	---	---	---	---	---	90	90	90	47	37	43
13	---	---	---	---	---	---	---	---	---	50	41	46
14	---	---	---	---	---	---	---	---	---	46	41	44
15	---	---	---	---	---	---	---	---	---	47	43	45
16	---	---	---	---	---	---	---	---	---	47	42	45
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	79	79	79	---	---	---
21	---	---	---	---	---	---	80	79	79	---	---	---
22	---	---	---	90	87	89	89	79	89	---	---	---
23	---	---	---	90	88	90	89	89	89	---	---	---
24	---	---	---	90	89	90	89	89	89	---	---	---
25	---	---	---	91	88	90	90	79	86	---	---	---
26	---	---	---	90	88	89	79	69	78	---	---	---
27	---	---	---	91	89	91	69	59	66	---	---	---
28	---	---	---	91	90	91	69	49	60	---	---	---
29	---	---	---	91	89	90	59	49	58	---	---	---
30	---	---	---	90	90	90	69	59	67	44	43	44
31	---	---	---	91	90	91	---	---	---	45	42	44
MONTH	---	---	---	91	87	90	93	49	83	69	37	53
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	44	40	43	59	58	59	87	84	85	89	88	89
2	41	40	41	60	58	59	88	85	86	89	87	88
3	41	40	40	62	60	61	87	86	87	89	86	88
4	43	41	42	62	61	61	88	86	87	88	86	87
5	44	41	43	62	61	62	89	85	87	88	85	86
6	47	43	47	61	60	61	89	87	88	89	82	86
7	49	47	49	62	61	62	89	87	88	90	88	89
8	49	47	49	62	60	61	90	87	88	91	90	91
9	48	45	47	62	60	61	90	87	88	91	90	90
10	47	45	46	64	56	60	89	87	88	92	91	91
11	46	42	45	65	63	64	88	87	88	92	89	90
12	47	44	45	67	64	65	88	85	87	91	90	91
13	48	46	47	68	67	67	88	85	86	92	89	90
14	50	48	49	69	66	68	87	85	86	89	85	87
15	51	50	50	68	65	67	87	85	85	88	86	87
16	52	51	52	71	67	69	86	85	86	90	88	89
17	52	51	52	72	70	71	88	86	87	90	87	89
18	53	52	53	72	70	71	89	87	88	89	87	88
19	53	53	53	74	71	73	89	86	87	89	87	88
20	53	52	53	76	74	75	90	88	89	88	87	87
21	54	52	53	79	76	77	90	88	89	88	87	88
22	53	50	52	79	77	78	90	88	89	87	86	87
23	53	50	51	80	78	79	91	89	90	88	86	87
24	52	49	51	82	79	80	91	89	90	88	85	86
25	53	50	52	83	80	81	91	89	90	87	85	86
26	54	52	53	84	81	82	91	89	90	87	84	85
27	56	54	55	84	83	83	91	89	90	86	84	85
28	56	54	56	85	83	84	91	88	90	86	83	85
29	57	56	57	85	83	84	91	89	90	85	83	84
30	58	56	57	86	84	85	91	89	90	84	81	83
31	---	---	---	86	84	85	91	88	90	---	---	---
MONTH	58	40	49	86	56	71	91	84	88	92	81	88
YEAR	93	37	74									

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible][illegible]

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	2.0	1.2	1.5	3.5	1.1	2.5
2	---	---	---	---	---	---	2.0	1.3	1.5	3.1	.1	1.5
3	---	---	---	---	---	---	1.6	.6	1.0	5.0	.2	2.5
4	---	---	---	---	---	---	1.6	.3	1.0	6.2	.3	2.5
5	---	---	---	---	---	---	2.2	1.4	2.0	6.0	1.0	3.0
6	---	---	---	---	---	---	2.3	1.8	2.0	5.1	1.1	3.0
7	---	---	---	---	---	---	2.4	1.9	2.0	6.3	.7	3.0
8	---	---	---	---	---	---	2.1	1.1	1.5	7.3	1.9	3.5
9	---	---	---	---	---	---	1.1	.4	.5	6.4	2.5	4.0
10	---	---	---	---	---	---	1.1	.2	.5	6.4	2.0	4.0
11	---	---	---	---	---	---	1.1	.0	.5	7.5	2.0	4.0
12	---	---	---	---	---	---	1.5	.7	1.0	8.1	2.0	4.0
13	---	---	---	---	---	---	---	---	---	8.0	2.5	4.5
14	---	---	---	---	---	---	---	---	---	6.6	3.0	4.5
15	---	---	---	---	---	---	---	---	---	4.0	3.2	3.5
16	---	---	---	---	---	---	---	---	---	4.8	3.0	3.5
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	2.8	1.4	2.5	---	---	---
21	---	---	---	---	---	---	2.3	.7	1.5	---	---	---
22	---	---	---	1.7	1.2	1.5	3.2	1.6	2.5	---	---	---
23	---	---	---	1.7	1.2	1.5	2.9	1.5	2.0	---	---	---
24	---	---	---	1.8	1.2	1.5	3.5	2.1	3.0	---	---	---
25	---	---	---	2.1	1.7	2.0	4.2	1.9	3.0	---	---	---
26	---	---	---	2.0	1.7	2.0	4.6	2.1	3.5	---	---	---
27	---	---	---	1.7	1.1	1.5	4.5	1.4	2.5	---	---	---
28	---	---	---	1.8	.9	1.5	4.5	1.5	2.5	---	---	---
29	---	---	---	2.2	1.6	2.0	4.7	1.7	3.0	---	---	---
30	---	---	---	2.1	1.5	1.5	4.6	1.9	3.0	8.2	2.7	5.0
31	---	---	---	1.6	.5	1.0	---	---	---	8.5	3.1	5.5
MONTH	---	---	---	2.2	.5	1.6	4.7	.0	1.9	8.5	.1	3.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.9	3.3	6.0	13.3	7.0	10.0	13.0	5.6	9.5	11.6	7.1	9.5
2	6.9	4.1	5.5	13.8	6.5	10.0	14.0	7.0	10.5	11.5	7.5	9.5
3	4.5	2.6	3.5	14.0	6.9	10.5	12.2	7.9	10.5	11.2	7.1	9.5
4	4.9	2.1	3.5	11.9	7.2	9.5	13.9	8.5	11.5	11.1	7.2	9.5
5	7.2	2.8	4.5	13.5	7.5	10.5	14.2	8.8	11.5	10.7	7.5	9.0
6	8.1	3.6	5.5	10.9	8.5	10.0	14.4	7.7	11.0	10.1	6.4	8.0
7	9.3	2.8	5.5	11.8	7.4	9.5	13.8	8.8	11.5	6.4	5.2	6.0
8	9.5	3.4	6.5	10.8	7.9	9.5	14.0	8.9	11.5	6.3	3.6	5.0
9	10.8	4.1	7.0	11.6	7.5	9.5	12.5	9.6	11.0	7.6	3.1	5.5
10	10.6	3.9	7.0	11.3	8.2	9.5	12.8	7.5	10.5	8.4	3.8	6.0
11	9.8	4.2	6.5	11.8	7.2	9.5	12.4	7.7	10.5	9.0	4.3	7.0
12	6.4	3.6	5.5	14.2	6.7	10.0	13.4	7.6	10.5	8.9	5.1	7.0
13	3.6	1.3	2.5	13.3	6.9	10.0	11.9	8.9	10.5	10.5	7.3	9.0
14	6.1	2.8	4.0	13.3	8.2	10.5	12.6	8.3	10.5	8.9	6.0	7.5
15	8.8	3.3	5.5	10.5	7.5	9.0	11.3	7.5	9.5	8.6	5.7	7.0
16	10.0	2.7	6.0	12.1	6.1	9.5	11.6	6.8	9.5	8.7	4.8	7.0
17	7.8	4.1	6.0	12.3	6.3	9.5	12.8	6.8	10.0	8.3	6.8	7.5
18	9.3	5.0	6.5	12.1	6.9	9.5	12.8	7.7	10.5	8.5	4.7	6.5
19	9.6	3.4	6.5	13.2	7.2	10.0	12.1	7.2	10.0	8.5	5.1	7.0
20	10.8	3.7	7.0	13.6	6.8	10.5	12.1	6.6	9.5	7.5	4.3	6.0
21	11.5	4.2	7.5	13.4	6.8	10.5	11.7	7.6	10.0	8.1	3.7	6.0
22	12.2	5.0	8.0	13.6	6.9	10.5	11.5	7.1	9.5	8.0	5.0	6.5
23	11.1	5.5	8.0	13.2	6.2	10.0	12.2	7.8	10.0	7.8	4.3	6.0
24	12.4	6.0	8.5	13.9	7.3	10.5	11.5	7.1	9.5	8.2	4.2	6.5
25	11.9	5.8	8.5	13.9	6.7	10.5	11.6	6.3	9.0	8.8	4.8	7.0
26	10.3	5.5	8.0	13.3	7.0	10.0	12.1	7.2	10.0	8.7	5.7	7.5
27	11.9	6.6	9.0	13.6	6.9	10.5	11.8	7.2	9.5	8.7	4.9	7.0
28	12.7	6.1	9.0	13.7	7.3	10.5	11.8	7.1	9.5	8.5	5.0	7.0
29	13.1	5.9	9.0	12.8	7.1	10.0	11.7	6.9	9.5	8.5	6.1	7.5
30	12.4	6.0	9.0	13.4	6.8	10.0	11.9	7.1	9.5	7.4	4.3	6.0
31	---	---	---	12.0	8.4	10.5	11.1	8.3	10.0	---	---	---
MONTH	13.1	1.3	6.5	14.2	6.1	10.0	14.4	5.6	10.2	11.6	3.1	7.2
YEAR	14.4	.0	6.7									

06279795 CROW CREEK AT MOUTH, NEAR PAHASKA, WY--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	9.6	9.4	9.5	9.8	9.1	9.5
2	---	---	---	---	---	---	9.6	9.5	9.5	10.1	9.4	9.7
3	---	---	---	---	---	---	9.9	9.6	9.8	10.2	9.0	9.6
4	---	---	---	---	---	---	10.0	9.8	9.9	10.1	8.7	9.6
5	---	---	---	---	---	---	9.8	9.6	9.7	9.9	8.7	9.4
6	---	---	---	---	---	---	9.8	9.6	9.7	9.9	9.1	9.6
7	---	---	---	---	---	---	9.8	9.6	9.7	10.2	9.0	9.7
8	---	---	---	---	---	---	10.1	9.7	9.9	10.0	8.7	9.5
9	---	---	---	---	---	---	10.2	10.1	10.2	9.5	8.6	9.1
10	---	---	---	---	---	---	10.3	10.1	10.2	9.6	8.7	9.2
11	---	---	---	---	---	---	10.3	10.1	10.2	9.7	8.6	9.3
12	---	---	---	---	---	---	10.2	10.1	10.2	9.8	8.6	9.4
13	---	---	---	---	---	---	---	---	---	9.7	8.7	9.4
14	---	---	---	---	---	---	---	---	---	9.8	9.1	9.5
15	---	---	---	---	---	---	---	---	---	9.9	9.6	9.8
16	---	---	---	---	---	---	---	---	---	10.2	9.6	9.9
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	9.5	9.1	9.2	---	---	---
21	---	---	---	---	---	---	9.7	9.3	9.5	---	---	---
22	---	---	---	10.8	10.6	10.7	9.6	9.1	9.4	---	---	---
23	---	---	---	11.0	10.8	10.9	9.7	9.3	9.5	---	---	---
24	---	---	---	11.2	10.9	11.0	9.6	9.1	9.4	---	---	---
25	---	---	---	11.0	10.6	10.8	9.7	9.0	9.3	---	---	---
26	---	---	---	10.6	10.2	10.4	9.6	8.9	9.3	---	---	---
27	---	---	---	10.2	10.0	10.1	9.7	9.0	9.4	---	---	---
28	---	---	---	10.0	9.5	9.7	9.6	8.9	9.4	---	---	---
29	---	---	---	9.6	9.3	9.5	9.6	8.9	9.3	---	---	---
30	---	---	---	9.6	9.3	9.5	9.6	9.0	9.3	11.3	9.8	10.6
31	---	---	---	9.8	9.5	9.6	---	---	---	11.4	9.7	10.6
MONTH	---	---	---	11.2	9.3	10.2	10.3	8.9	9.6	11.4	8.6	9.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	11.3	9.4	10.5	10.6	8.8	9.8	10.2	8.4	9.2	9.4	8.3	8.8
2	11.0	10.3	10.7	10.6	8.8	9.7	9.7	8.2	8.9	9.2	8.3	8.7
3	11.6	10.9	11.2	10.5	8.7	9.7	9.6	8.5	8.9	9.2	8.3	8.7
4	11.8	11.0	11.4	10.6	9.2	9.9	9.4	8.1	8.7	9.4	8.4	8.9
5	11.6	10.6	11.1	10.4	8.8	9.6	9.4	8.1	8.7	9.3	8.4	8.9
6	11.1	9.9	10.6	10.0	9.3	9.7	9.8	8.1	8.8	9.4	8.5	9.1
7	11.4	9.6	10.6	10.4	9.1	9.8	9.3	8.1	8.6	9.8	9.4	9.6
8	11.2	9.6	10.4	10.3	9.5	9.9	9.2	8.1	8.6	10.4	9.6	10.0
9	11.0	9.3	10.2	10.4	9.2	9.7	9.1	8.3	8.7	10.5	9.3	9.9
10	11.1	9.3	10.3	10.1	9.2	9.7	9.6	8.2	8.8	10.3	9.2	9.7
11	11.0	9.5	10.3	10.3	9.0	9.7	9.5	8.4	8.9	10.3	9.1	9.6
12	11.1	10.3	10.6	10.6	8.5	9.6	9.4	8.1	8.7	10.0	9.1	9.5
13	11.9	11.1	11.5	10.5	8.6	9.6	9.3	8.3	8.7	9.6	8.8	9.2
14	11.5	10.5	11.1	10.0	8.6	9.3	9.4	8.1	8.7	10.0	9.2	9.6
15	11.3	9.8	10.7	10.2	9.1	9.6	9.5	8.5	8.9	10.0	9.3	9.7
16	11.5	9.6	10.6	10.5	8.8	9.6	9.6	8.5	9.0	10.3	9.3	9.7
17	11.1	10.1	10.6	10.5	8.7	9.6	9.6	8.3	8.9	9.8	9.4	9.5
18	10.9	9.8	10.4	10.2	8.8	9.5	9.4	8.2	8.8	10.3	9.3	9.8
19	11.4	9.7	10.6	9.8	8.5	9.1	9.4	8.4	8.9	10.2	9.4	9.7
20	11.4	9.5	10.4	9.9	8.3	9.0	9.6	8.4	9.0	10.4	9.6	9.9
21	11.3	9.3	10.3	9.8	8.4	9.0	9.3	8.4	8.8	10.6	9.4	10.0
22	10.9	9.1	10.1	9.8	8.4	9.0	9.4	8.4	8.9	10.3	9.4	9.8
23	10.9	9.4	10.2	9.9	8.3	9.0	9.3	8.3	8.8	10.5	9.6	10.0
24	10.8	9.1	10.0	9.6	8.2	8.9	9.5	8.5	8.9	10.6	9.4	10.0
25	11.0	9.3	10.2	9.8	8.1	8.9	9.7	8.5	9.0	10.3	9.2	9.8
26	11.0	9.6	10.4	9.6	8.2	8.9	9.5	8.4	8.9	10.1	9.4	9.6
27	10.7	9.2	10.1	9.7	8.2	8.9	9.5	8.5	8.9	10.2	9.2	9.7
28	10.9	9.0	10.0	9.6	8.2	8.9	9.6	8.4	8.9	10.3	9.4	9.8
29	11.0	9.0	10.0	9.7	8.4	9.0	9.5	8.4	8.9	10.1	9.5	9.8
30	10.9	9.2	10.0	9.7	8.2	8.9	9.4	8.3	8.9	10.7	9.7	10.1
31	---	---	---	9.3	8.6	8.9	9.2	8.4	8.7	---	---	---
MONTH	11.9	9.0	10.5	10.6	8.1	9.4	10.2	8.1	8.8	10.7	8.3	9.6
YEAR	11.9	8.1	9.6									





## YELLOWSTONE RIVER BASIN

06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY

LOCATION.--Lat 44°28'10", long 109°25'49", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.19, T.52 N., R.104 W., Park County, Hydrologic Unit 10080012, on left bank 1,000 ft downstream from bridge on U.S. Highway 14-20, 0.3 mi upstream from Jim Creek, and 0.3 mi downstream from Wapiti.

DRAINAGE AREA.--699 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,580 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion for irrigation of about 1,500 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 9, 1981, at station 06280000 North Fork Shoshone River near Wapiti, 4.2 mi downstream, reached a discharge of 20,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	862	203	152	113	e100	e90	182	1440	2250	1180	312	190
2	636	185	141	114	101	e96	185	912	2430	1120	301	185
3	364	171	143	104	e100	e100	179	739	2070	1060	292	180
4	293	180	150	115	e100	e110	181	741	1470	988	293	174
5	257	206	149	115	e100	111	184	1050	1210	946	319	177
6	230	188	147	114	e100	121	206	1140	1070	950	288	279
7	219	158	147	115	e100	131	206	972	1040	867	274	273
8	210	131	149	100	e86	153	200	1240	1150	829	271	267
9	208	172	148	95	e94	173	184	1750	1450	853	287	215
10	205	155	148	116	e96	177	178	1610	1700	938	336	193
11	208	e150	e130	119	e96	156	184	1680	1640	908	290	186
12	215	e140	e110	111	e96	145	184	2170	1600	762	273	187
13	211	e130	e130	113	e98	141	178	3020	1350	696	261	186
14	222	e120	e140	121	e98	138	174	3510	1280	656	262	204
15	223	e135	e130	109	e98	130	160	3740	1310	707	270	230
16	219	e150	e120	101	e98	123	177	3690	1310	630	267	191
17	229	e150	e130	e96	e100	131	219	2500	1290	565	250	201
18	245	e150	e130	e100	100	140	483	2260	1230	525	234	213
19	227	e160	e120	e110	102	139	608	2100	1160	500	223	185
20	216	e160	e110	e110	103	186	416	2150	1260	478	215	184
21	209	e150	e120	e100	103	210	327	1440	1480	454	220	179
22	208	e150	119	108	103	224	305	1370	1680	439	223	176
23	201	e150	122	e110	104	246	312	1820	1870	424	222	173
24	204	e140	117	110	e100	259	284	2540	1930	406	215	169
25	254	e130	116	106	e100	221	433	2740	1900	392	208	164
26	244	e150	111	e100	e96	235	808	2980	1570	377	201	162
27	248	e160	113	e98	e96	212	1200	2800	1490	358	202	159
28	228	e140	114	e96	e94	192	1410	2660	1410	347	202	159
29	219	e130	113	e92	---	186	1460	2630	1340	334	197	159
30	214	e150	98	e94	---	194	1130	2490	1250	326	191	161
31	210	---	117	e98	---	176	---	2120	---	322	188	---
TOTAL	8138	4644	3984	3303	2762	5046	12337	64004	45190	20337	7787	5761
MEAN	263	155	129	107	98.6	163	411	2065	1506	656	251	192
MAX	862	206	152	121	104	259	1460	3740	2430	1180	336	279
MIN	201	120	98	92	86	90	160	739	1040	322	188	159
AC-FT	16140	9210	7900	6550	5480	10010	24470	127000	89630	40340	15450	11430

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2001, BY WATER YEAR (WY)

MEAN	263	210	160	145	146	206	525	2075	3551	1910	590	327
MAX	330	304	283	199	184	294	792	3459	6251	3130	1015	480
(WY)	1998	1997	1996	1997	1997	1997	1990	1997	1997	1996	1997	1997
MIN	216	155	129	107	98.6	144	282	1221	1506	595	249	170
(WY)	2000	2001	2001	2001	2001	1991	1993	1990	2001	1994	1994	1994

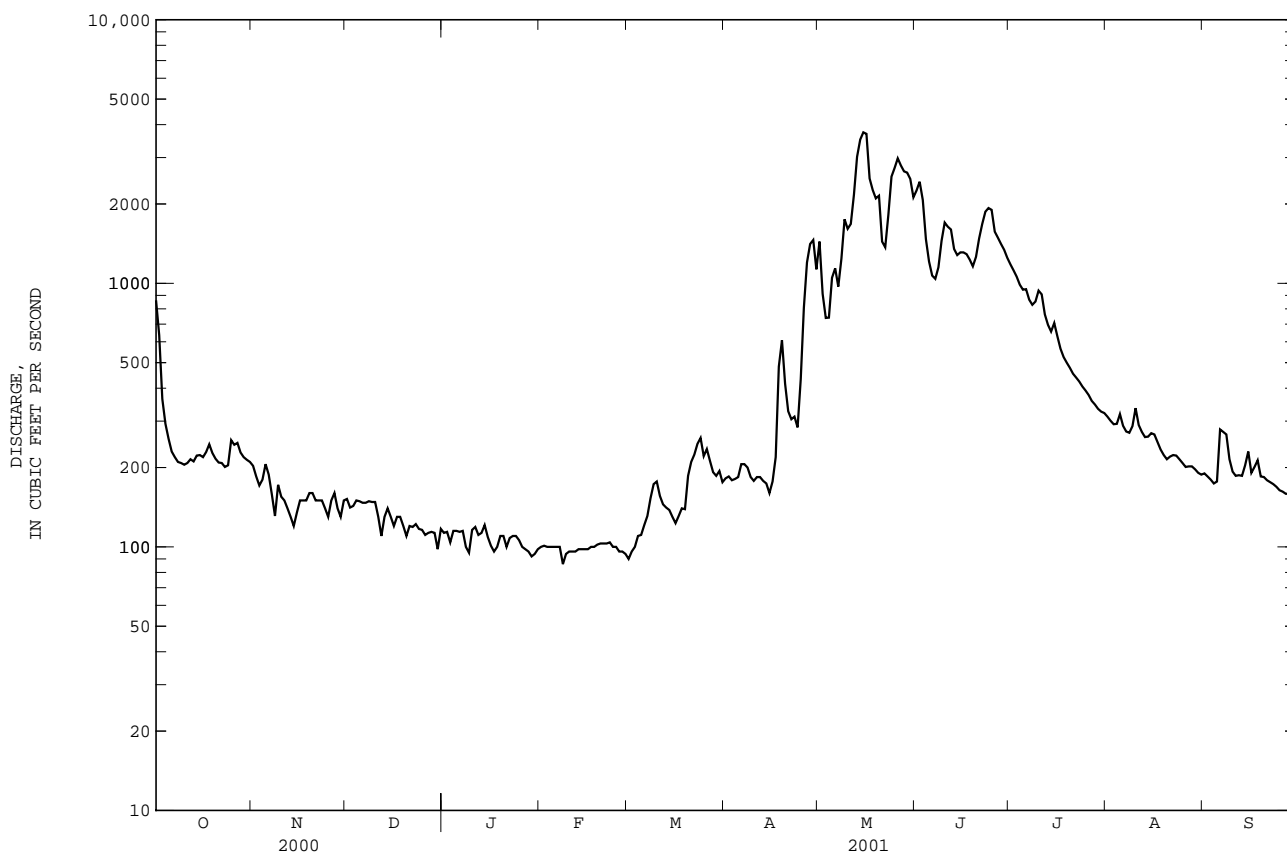
06279940 NORTH FORK SHOSHONE RIVER AT WAPITI, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1990 - 2001	
ANNUAL TOTAL	244340		183293		--	
ANNUAL MEAN	668		502		844	
HIGHEST ANNUAL MEAN	--		--		1324	1997
LOWEST ANNUAL MEAN	--		--		502	2001
HIGHEST DAILY MEAN	4600	May 28	3740	May 15	8940	Jun 10 1997
LOWEST DAILY MEAN	98	Dec 30	86	Feb 8	74	Dec 23 1996
ANNUAL SEVEN-DAY MINIMUM	112	Dec 24	95	Feb 8	81	Dec 19 1996
MAXIMUM PEAK FLOW	--		4510	May 14	11000 <sup>a</sup>	Jun 9 1996
MAXIMUM PEAK STAGE	--		6.41	May 14	9.54 <sup>b</sup>	Jun 13 1991
ANNUAL RUNOFF (AC-FT)	484600		363600		611700	
10 PERCENT EXCEEDS	1970		1450		2600	
50 PERCENT EXCEEDS	216		201		266	
90 PERCENT EXCEEDS	135		100		135	

a Gage height, 8.63 ft, from floodmarks.

b Discharge 9,460 ft<sup>3</sup>/s.

e Estimated.



## YELLOWSTONE RIVER BASIN

06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY

LOCATION.--Lat 44°12'30", long 109°33'15", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.24, T.49 N., R.106 W., Park County, Hydrologic Unit 10080013, Shoshone National Forest, on left bridge abutment of U.S. Forest Service bridge, 0.4 mi downstream from Boulder Creek, 3.2 mi northeast of Valley, and 34 mi southwest of Cody.

DRAINAGE AREA.--297 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to September 1958, October 1959 to current year.

REVISED RECORDS.--WRD WY 1974: 1963.

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above sea level, from topographic map. Prior to Nov. 22, 1961, at site 75 ft upstream at same datum.

REMARKS.--Records fair. Diversions for irrigation of about 450 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	131	82	72	64	56	78	527	1160	711	149	114
2	296	118	76	66	66	56	79	285	1220	643	144	109
3	215	101	84	70	68	63	78	225	921	570	143	106
4	187	101	85	75	68	65	78	204	615	533	145	104
5	178	110	85	75	70	66	76	292	480	504	143	103
6	165	106	77	75	71	69	78	355	406	503	136	135
7	157	103	84	68	68	70	80	276	472	434	135	132
8	152	89	82	59	45	74	80	393	772	565	134	134
9	150	100	83	62	61	81	76	671	1090	556	137	124
10	151	92	82	72	61	80	74	629	1130	539	144	114
11	155	81	71	72	64	74	76	673	1070	445	139	110
12	150	68	62	72	64	70	77	950	947	386	137	110
13	147	62	61	74	65	69	77	1280	659	343	132	109
14	147	61	66	71	65	69	77	1500	559	330	137	123
15	146	69	71	64	66	67	73	1560	580	364	136	137
16	143	77	64	61	66	65	75	1590	591	311	132	119
17	144	79	74	56	66	68	86	1070	683	269	130	138
18	147	82	75	60	66	70	152	945	724	240	126	132
19	144	89	73	65	67	68	208	899	602	227	123	116
20	140	90	75	68	69	73	147	954	681	214	119	110
21	139	89	67	64	68	72	127	519	783	201	119	107
22	136	95	70	67	67	73	121	457	964	194	117	106
23	133	92	75	69	67	80	121	758	1040	193	114	105
24	133	91	76	68	67	92	117	1140	1100	187	113	103
25	140	84	77	68	63	86	159	1260	1180	178	112	100
26	137	90	70	68	64	86	329	1420	975	174	109	98
27	136	93	71	64	64	83	533	1370	987	167	109	97
28	132	88	74	60	57	80	531	1350	892	162	108	96
29	131	75	65	57	---	81	553	1170	806	157	106	96
30	132	89	66	59	---	81	397	1130	738	155	107	96
31	134	---	71	62	---	78	---	1050	---	151	105	---
TOTAL	4798	2695	2294	2063	1817	2265	4813	26902	24827	10606	3940	3383
MEAN	155	89.8	74.0	66.5	64.9	73.1	160	868	828	342	127	113
MAX	296	131	85	75	71	92	553	1590	1220	711	149	138
MIN	131	61	61	56	45	56	73	204	406	151	105	96
AC-FT	9520	5350	4550	4090	3600	4490	9550	53360	49240	21040	7810	6710

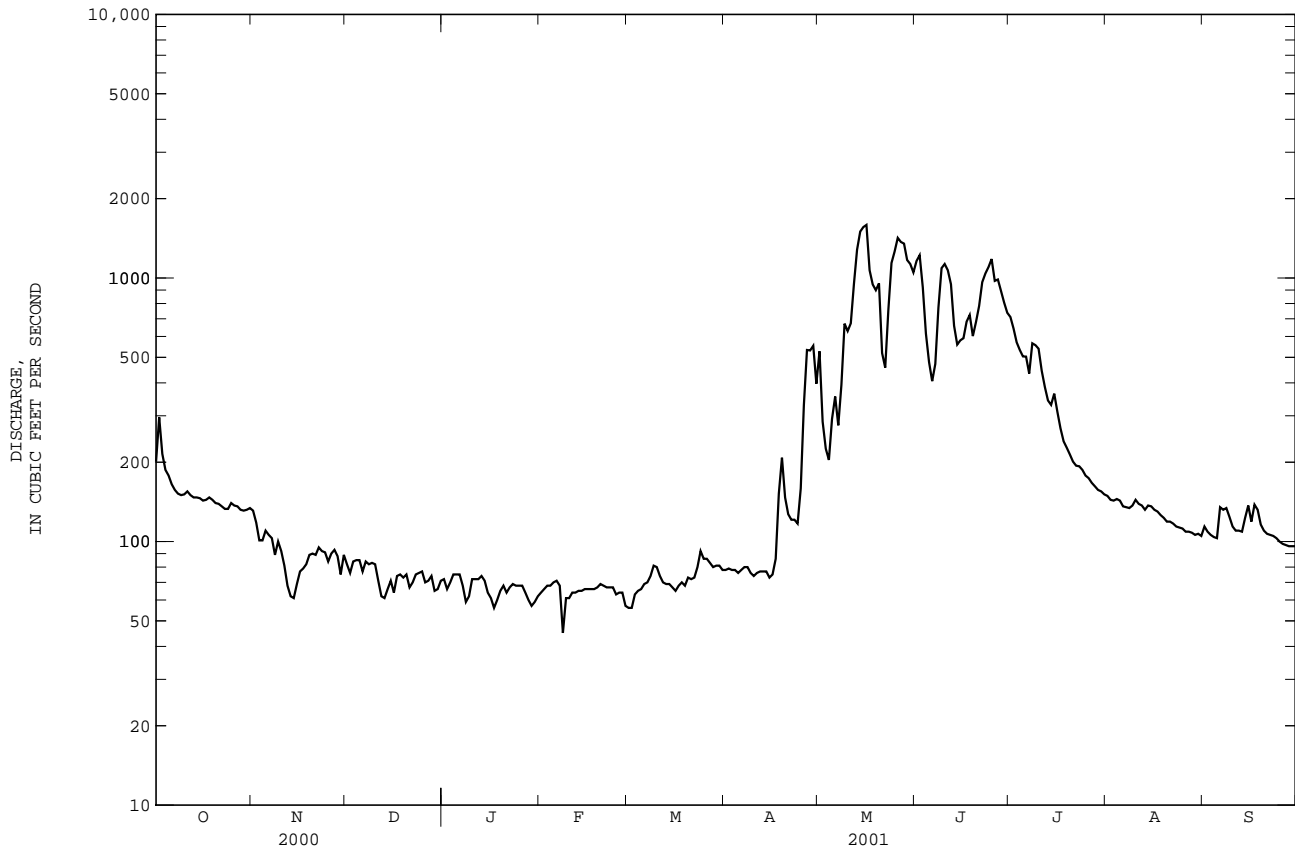
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
MEAN	157	109	83.5	76.9	73.2	80.1	164	748	1733	1119	377	212
MAX	244	147	109	100	93.8	128	341	1387	2920	2287	834	341
(WY)	1983	1985	1966	1997	1962	1986	1962	1958	1997	1975	1982	1982
MIN	92.5	70.6	56.2	55.2	54.8	59.8	69.6	252	828	308	127	110
(WY)	1989	1980	1989	1989	1989	1975	1970	1977	2001	1988	2001	1988

## 06280300 SOUTH FORK SHOSHONE RIVER NEAR VALLEY, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1957 - 2001	
ANNUAL TOTAL	123400		90403		--	
ANNUAL MEAN	337		248		412	
HIGHEST ANNUAL MEAN	--		--		609	1997
LOWEST ANNUAL MEAN	--		--		221	1977
HIGHEST DAILY MEAN	2270	Jun 7	1590	May 16	6100	Jun 9 1981
LOWEST DAILY MEAN	57	Jan 30,31	45	Feb 8	31	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	63	Jan 27	60	Feb 25	40	Dec 18 1990
MAXIMUM PEAK FLOW	--		2070	May 16	10000	Jun 9 1981
MAXIMUM PEAK STAGE	--		6.74	May 16	9.24 <sup>a</sup>	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	244800		179300		298400	
10 PERCENT EXCEEDS	1090		730		1250	
50 PERCENT EXCEEDS	140		109		139	
90 PERCENT EXCEEDS	74		66		68	

a From floodmarks.



## YELLOWSTONE RIVER BASIN

06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°25'09", long 109°15'26", in lot 5, SE $\frac{1}{4}$  NE $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 5, T.51 N., R.103 W., Park County, Hydrologic Unit 10080013, on right bank at old diversion structure 0.2 miles downstream from Cody Canal diversion, 1 mile upstream from normal pool of Buffalo Bill Reservoir at elevation 5,364 ft, and 12.5 miles southwest of Cody.

DRAINAGE AREA.--585 mi<sup>2</sup>.

PERIOD OF RECORD.--May to November 1903, May 1905 to September 1908, January 1921 to September 1926, October 1973 to current year (gage heights only June to September 1908). No winter records 1906, 1908, 1922. Published as "at Marquette" 1903, 1905-8, and as Shoshone River above Shoshone Reservoir 1921-26.

REVISED RECORDS.--WSP 1309: 1907.

GAGE.--Water-stage recorder. Elevation of gage is 5,440 ft above sea level, from topographic map. Apr. 26 to Nov. 30, 1903, and May 1905 to May 30, 1908, nonrecording gages at sites within about 6.0 mi downstream at different datums. Prior to Oct. 3, 1989, recording gage at site 1.1 mile downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station. Bureau of Reclamation data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	129	131	111	e86	e82	81	210	771	309	.66	.76
2	134	141	107	112	e88	e86	82	92	1030	277	.62	.75
3	118	129	109	103	e90	e90	81	3.6	670	195	.68	.72
4	88	123	115	107	e96	e98	86	2.8	363	169	.76	.71
5	78	129	113	105	e100	e100	82	7.7	204	146	.74	.71
6	68	129	113	101	e100	100	80	73	128	114	.69	1.2
7	63	128	106	103	e90	103	79	6.4	118	84	.67	1.6
8	62	122	107	82	e70	106	83	17	309	41	.71	1.2
9	58	123	106	86	e88	107	78	222	544	309	.75	1.0
10	43	127	111	97	e90	116	74	212	783	206	1.1	.86
11	44	122	104	113	e90	118	75	217	697	184	.77	.81
12	54	108	e90	104	e90	102	78	408	579	134	.74	.81
13	50	98	e94	105	e92	98	84	801	448	100	.70	.80
14	51	95	e100	104	e92	97	81	1210	486	69	.73	.77
15	53	98	e110	95	e94	93	79	1280	589	73	.74	.97
16	50	104	e100	91	e94	90	25	1280	546	42	.75	.70
17	49	104	e110	81	e96	89	4.1	586	503	4.7	.73	.75
18	49	106	e110	96	e96	91	21	496	574	1.6	.71	.75
19	48	115	e110	99	e96	94	131	366	424	1.1	.68	.66
20	46	118	e100	108	e100	104	87	588	393	.93	.77	.67
21	45	117	88	100	e98	103	28	205	443	.89	.80	.65
22	44	122	106	114	e98	100	2.9	88	615	.99	.77	.56
23	43	130	114	112	e96	103	2.7	240	729	.92	.74	.59
24	43	121	117	e100	e94	110	e2.7	674	752	.89	.73	.39
25	44	129	115	e98	e90	113	e2.7	875	906	.83	.74	.36
26	42	113	118	e94	e90	110	e3.0	1070	629	.79	.71	.35
27	95	118	107	e94	e90	99	e4.0	1160	642	.73	.74	.35
28	114	124	106	e94	e84	90	e4.0	1150	510	.75	.75	.32
29	113	112	124	e92	---	88	e1.0	915	428	.84	.74	.37
30	113	112	111	86	---	87	e65	832	348	.78	.75	.46
31	114	---	113	e84	---	84	---	684	---	.67	.74	---
TOTAL	2030	3546	3365	3071	2578	3051	1587.1	15971.5	16161	2469.41	22.91	21.60
MEAN	65.5	118	109	99.1	92.1	98.4	52.9	515	539	79.7	.74	.72
MAX	134	141	131	114	100	118	131	1280	1030	309	1.1	1.6
MIN	14	95	88	81	70	82	1.0	2.8	118	.67	.62	.32
AC-FT	4030	7030	6670	6090	5110	6050	3150	31680	32060	4900	45	44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2001, BY WATER YEAR (WY)

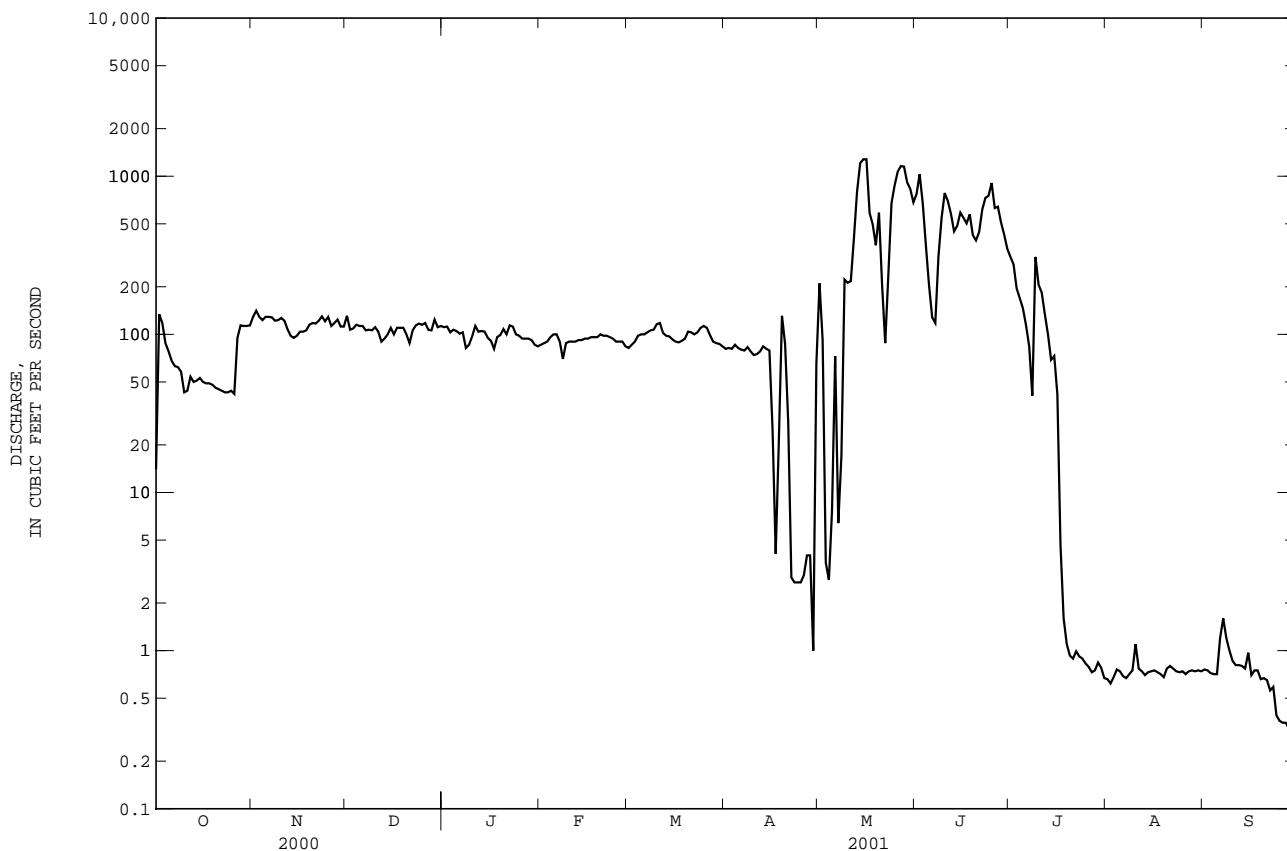
MEAN	109	154	117	103	101	113	189	689	1730	1053	188	84.5
MAX	407	268	167	158	145	174	387	1281	3813	3033	1083	381
(WY)	1924	1924	1998	1997	1998	1986	1925	1991	1997	1907	1907	1907
MIN	18.0	71.2	54.5	51.9	72.9	76.8	52.9	168	495	18.9	.74	.039
(WY)	1979	1980	1925	1995	1985	1924	2001	1977	1994	1994	2001	1992

## 06281000 SOUTH FORK SHOSHONE RIVER ABOVE BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1903 - 2001	
ANNUAL TOTAL	94040.8		53874.52		--	
ANNUAL MEAN	257		148		378	
HIGHEST ANNUAL MEAN	--		--		705	
LOWEST ANNUAL MEAN	--		--		148	
HIGHEST DAILY MEAN	2600	May 29	1280	May 15,16	7370	Jun 9 1981
LOWEST DAILY MEAN	1.3	Sep 15-18	.32	Sep 28	.00	Several days, 1992-1993
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 13	.37	Sep 24	.00	Sep 15 1992
MAXIMUM PEAK FLOW	--		1850	May 16	9960	Jun 9 1981
MAXIMUM PEAK STAGE	--		6.78	May 16	9.41 <sup>a</sup>	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	186500		106900		273900	
10 PERCENT EXCEEDS	783		434		1250	
50 PERCENT EXCEEDS	110		94		125	
90 PERCENT EXCEEDS	2.5		.74		29	

a Site and datum then in use.

e Estimated.



## YELLOWSTONE RIVER BASIN

06281500 BUFFALO BILL RESERVOIR NEAR CODY, WY

LOCATION.--Lat 44°30'05", long 109°11'00", in NE<sup>1</sup>/<sub>4</sub> sec.12, T.52 N., R.103 W., Park County, Hydrologic Unit 10080013, at dam on Shoshone River, 5.0 mi upstream from Trail Creek, and 6.0 mi southwest of Cody.

DRAINAGE AREA.--1,498 mi<sup>2</sup>.

PERIOD OF RECORD.--May to July 1909, January 1910 to current year. Monthend contents only prior to October 1938, published in WSP 1309. Prior to October 1944, published as Shoshone Reservoir near Cody.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to July 8, 1959, nonrecording gage at same datum.

REMARKS.--Reservoir is formed by masonry dam completed by Bureau of Reclamation in 1909. Height of dam was increased 25 ft, effective 1992, increasing capacity to 604,800 acre-ft, elevation 5,393.50 ft, from 424,000 acre-ft, elevation 5,360.00 ft. Crest of dam is at elevation 5,395.00 ft. Dead storage negligible. Figures given herein represent total contents. Water used for power generation and irrigation of lands east of Cody.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 647,000 acre-ft, July 30, 1996, elevation, 5,390.53 ft; minimum daily contents, 19,000 acre-ft, Jan 23-25, 1941, elevation, 5,225.3 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 464,000 acre-ft, June 29, 30, maximum daily elevation, 5,369.46 ft, July 1; minimum daily contents, 267,000 acre-ft, Sept. 30, minimum daily elevation, 5,337.62 ft, Sept. 30.

Capacity table (elevation in feet,  
and contents, in acre-feet)

5,335	251,000	5,365	429,000
5,345	304,000	5,375	500,000
5,355	364,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400000	390000	385000	379000	370000	362000	358000	353000	410000	464000	401000	320000
2	400000	391000	385000	378000	370000	362000	358000	352000	414000	463000	398000	318000
3	399000	390000	385000	378000	369000	362000	358000	351000	416000	463000	396000	313000
4	398000	390000	384000	378000	369000	361000	358000	349000	417000	461000	393000	313000
5	397000	390000	384000	378000	369000	361000	358000	348000	417000	460000	391000	310000
6	396000	390000	384000	378000	369000	361000	358000	347000	416000	459000	388000	308000
7	395000	390000	384000	377000	369000	361000	357000	346000	416000	457000	385000	306000
8	394000	390000	384000	377000	368000	361000	357000	346000	416000	455000	383000	304000
9	393000	390000	384000	377000	368000	360000	357000	346000	417000	454000	380000	302000
10	392000	389000	383000	376000	368000	360000	357000	345000	420000	453000	377000	300000
11	391000	389000	383000	376000	367000	360000	356000	346000	422000	451000	375000	299000
12	391000	389000	383000	376000	367000	360000	356000	348000	424000	451000	372000	297000
13	391000	389000	383000	376000	367000	360000	356000	351000	427000	449000	369000	295000
14	391000	388000	383000	375000	366000	360000	356000	357000	431000	447000	367000	294000
15	390000	388000	382000	375000	366000	359000	356000	363000	434000	445000	364000	292000
16	390000	388000	382000	375000	366000	359000	355000	369000	438000	442000	362000	291000
17	390000	388000	382000	374000	366000	359000	355000	372000	441000	440000	359000	289000
18	390000	387000	382000	374000	365000	359000	355000	374000	444000	438000	357000	287000
19	390000	387000	381000	374000	365000	358000	356000	375000	447000	435000	354000	286000
20	390000	387000	381000	374000	365000	358000	356000	377000	449000	432000	352000	284000
21	390000	387000	381000	373000	364000	358000	355000	377000	451000	430000	349000	282000
22	390000	386000	381000	373000	364000	358000	354000	377000	454000	427000	347000	281000
23	390000	386000	380000	373000	364000	358000	353000	378000	456000	425000	344000	279000
24	390000	386000	380000	373000	364000	358000	352000	380000	459000	422000	341000	278000
25	390000	386000	380000	372000	363000	359000	350000	384000	461000	420000	339000	276000
26	390000	386000	380000	372000	363000	358000	349000	389000	462000	417000	336000	274000
27	390000	386000	380000	372000	363000	359000	350000	393000	463000	414000	333000	272000
28	390000	386000	380000	371000	362000	358000	351000	398000	464000	412000	330000	271000
29	390000	386000	379000	371000	---	358000	352000	401000	464000	409000	328000	269000
30	390000	385000	379000	371000	---	358000	352000	404000	464000	406000	325000	267000
31	390000	---	379000	370000	---	358000	---	407000	---	403000	323000	---
MAX	400000	391000	385000	379000	370000	362000	358000	407000	464000	464000	401000	320000
MIN	390000	385000	379000	370000	362000	358000	349000	345000	410000	403000	323000	267000
(#)	5358.58	5357.82	5356.86	5355.50	5354.28	5353.63	5352.57	5361.15	5369.48	5361.02	5347.69	5337.62
(*)	-10,000	-5,000	-6,000	-9,000	-8,000	-4,000	-6,000	+55,000	+57,000	-61,000	-80,000	-56,000

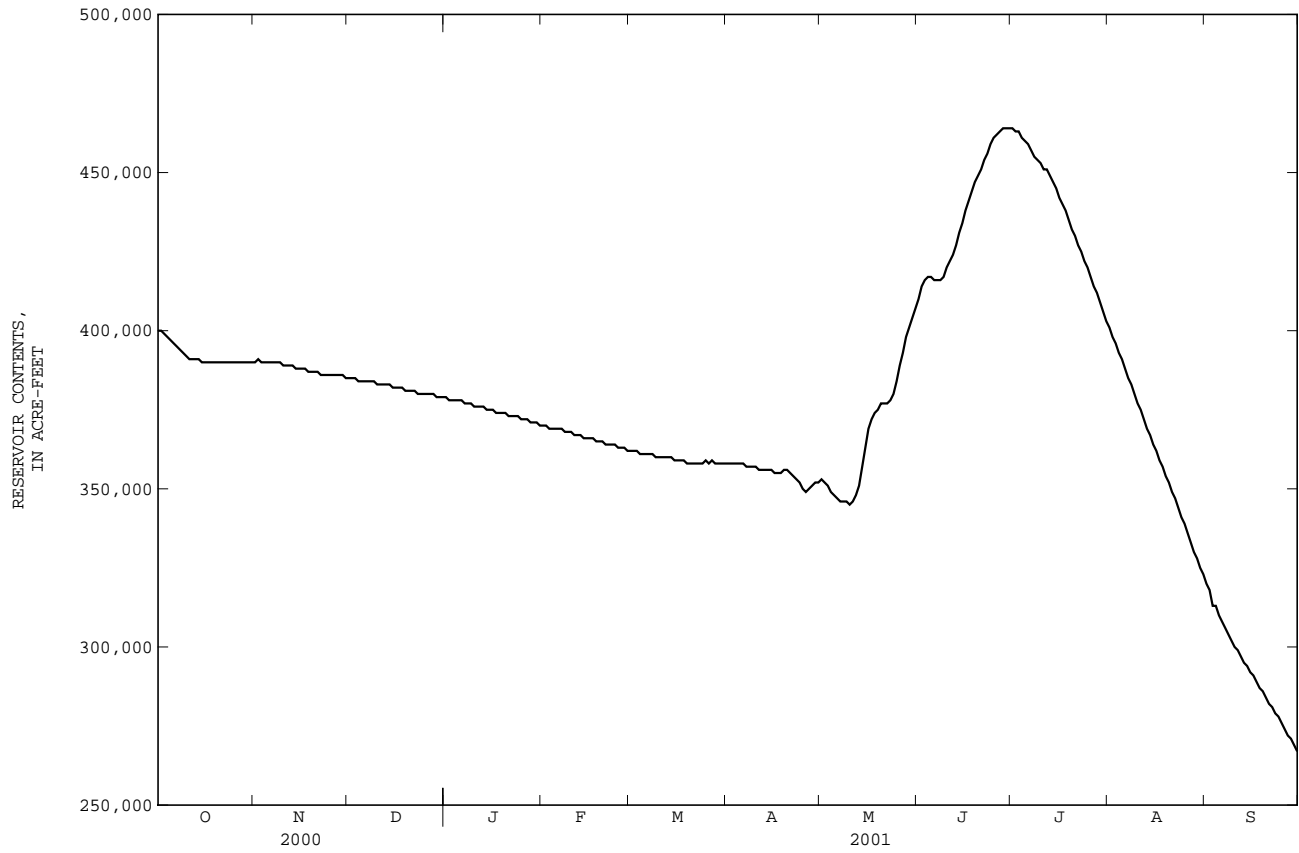
WTR YR 2001 MAX 464,000 MIN 267,000 (\*) -227,000

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.



06281500 BUFFALO BILL RESERVOIR NEAR CODY, WY--Continued



## YELLOWSTONE RIVER BASIN

06281700 SHOSHONE RIVER ABOVE DEMARIS SPRINGS, NEAR CODY, WY

LOCATION.--Lat 44°30'39", long 109°08'47", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.5, T.52 N., R.102 W, Park County, Hydrologic Unit 10080014, at bridge on State Highway 16, 1.9 mi downstream from Buffalo Bill Reservoir, and 3.8 mi west of Cody city limits.

PERIOD OF RECORD.--October 1987 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
DEC 20...	1230	370	2.1	635	15.5	133	--	205	-6.0	1.5	60	17.6	3.98
FEB 28...	1530	333	2.5	--	11.2	--	7.2	266	8.0	2.0	99	28.6	6.64
MAY 16...	0930	1020	3.0	629	10.5	108	7.0	210	22.0	8.0	75	21.4	5.12
JUN 18...	1540	450	12	615	10.8	122	7.0	175	18.0	11.0	48	13.8	3.33
JUL 31...	1050	1030	6.7	632	10.9	124	7.1	169	24.5	12.5	57	16.1	3.98
AUG 08...	1800	1000	7.9	638	9.5	108	7.1	177	26.0	13.0	59	16.7	4.17
AUG 29...	1045	1010	7.9	636	10.0	119	6.9	171	19.5	15.0	58	16.6	4.04
SEP 19...	1825	678	5.2	632	6.8	83	--	205	20.5	15.5	71	20.2	5.01

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
DEC 20...	.92	.6	11.2	78	1.3	E.2	13.5	27.5	.17	123	123	<.041	.12
FEB 28...	1.61	.8	17.6	97	1.8	.2	13.9	38.2	.23	150	167	<.041	.12
MAY 16...	1.00	.8	15.5	78	1.6	E.1	12.4	27.9	.18	364	132	<.040	E.08
JUN 18...	.89	.6	9.7	66	1.0	E.1	12.7	19.9	.14	123	101	<.040	.12
JUL 31...	.97	.7	11.3	63	1.0	E.1	12.6	20.8	.14	290	104	<.040	.10
AUG 08...	1.16	.6	10.9	65	1.1	E.1	12.8	22.9	.15	294	109	E.035	.09
AUG 29...	.98	.7	11.8	63	.9	E.1	12.3	21.6	.14	289	106	<.040	.29
SEP 19...	1.32	.7	14.0	74	1.5	.2	12.7	27.5	.17	232	127	<.040	.14

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
DEC 20...	<.047	E.004	<.060	E.016	<.060
FEB 28...	<.047	<.006	<.060	E.016	E.045
MAY 16...	<.050	<.006	<.060	.025	<.060
JUN 18...	<.050	<.006	.094	E.012	.061
JUL 31...	E.045	<.006	<.060	.020	E.053
AUG 08...	.047	<.006	E.041	.023	E.049
AUG 29...	E.023	<.006	E.038	E.033	E.046
SEP 19...	E.030	<.006	E.031	.022	E.046

E -- Estimated value.

## 06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY

LOCATION.--Lat 44°31'00", long 109°05'50", in lot 71, NE<sup>1</sup>/<sub>4</sub> sec.3, T.52 N., R.102 W., Park County, Hydrologic Unit 10080014, on left bank 0.5 mi downstream from Trail Creek, 1.0 mi west of Cody city limits, and 5.5 mi downstream from Buffalo Bill Reservoir.

DRAINAGE AREA.--1,538 mi<sup>2</sup>. Area at site prior to Oct. 1, 1949, 1,502 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1921 to current year. Prior to October 1944, published as "below Shoshone Reservoir".

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above sea level, from topographic map. Prior to Oct. 1, 1949, at site 2.5 mi upstream at different datum.

REMARKS.--Records good. Flow completely regulated by Buffalo Bill Reservoir (station 06281500). Diversions upstream from station for irrigation of about 56,100 acres, of which about 37,900 acres are downstream from station. Diversion, 2.1 mi upstream, to Heart Mountain Canal began in 1943. Bureau of Reclamation data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since construction of Buffalo Bill Reservoir in 1909, 18,700 ft<sup>3</sup>/s, June 15, 1918, by computation of flow over Corbett Dam, 10 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	727	423	431	425	402	383	377	1030	1000	1060	1030	1040
2	737	432	433	432	402	379	378	1040	1000	1070	1040	1060
3	672	429	435	430	401	377	386	1040	996	1060	1040	1060
4	636	427	438	436	401	378	386	1040	979	1110	1050	998
5	636	442	435	426	406	374	385	1120	949	1110	1070	971
6	623	443	438	426	405	376	383	1090	914	1130	1060	966
7	589	441	441	426	400	393	378	1100	898	1130	1040	929
8	589	444	440	425	394	393	387	1110	891	1130	1040	886
9	593	446	438	424	393	385	385	1090	887	1120	1090	851
10	521	454	438	422	394	383	378	1100	880	1090	1120	773
11	415	454	430	423	390	377	375	1100	924	1080	1100	770
12	389	454	431	425	396	382	377	1090	953	1080	1100	758
13	392	455	426	424	400	389	376	1090	728	1110	1110	769
14	396	469	426	428	389	379	377	1090	358	1100	1070	774
15	401	457	428	429	388	392	382	1080	352	1130	1070	772
16	403	459	434	426	394	394	384	1070	406	1130	1090	772
17	401	459	433	427	397	391	386	1070	437	1110	1100	771
18	399	459	437	408	390	392	384	1090	442	1070	1100	756
19	403	458	438	398	389	393	457	1080	445	1080	1090	740
20	403	462	434	411	392	386	559	1060	495	1080	1090	741
21	404	461	432	414	393	384	579	1070	736	1090	1040	723
22	414	461	434	403	416	382	577	1010	834	1090	1060	717
23	415	423	433	409	399	380	634	1010	946	1090	1070	718
24	418	414	433	418	386	392	795	1010	1070	1090	1050	717
25	410	420	433	413	389	382	815	1020	1070	1100	1050	718
26	411	414	430	409	388	375	888	1010	1170	1100	1050	718
27	423	414	429	407	389	378	937	1030	1160	1100	1060	720
28	423	415	426	407	382	380	970	1080	1110	1100	1060	719
29	423	440	427	407	---	382	1050	1040	1120	1070	1050	718
30	424	433	427	404	---	382	1070	1030	1100	1080	1050	719
31	424	---	426	402	---	386	---	1020	---	1060	1050	---
TOTAL	14914	13262	13414	12964	11065	11899	16195	32910	25250	33950	33090	24344
MEAN	481	442	433	418	395	384	540	1062	842	1095	1067	811
MAX	737	469	441	436	416	394	1070	1120	1170	1130	1120	1060
MIN	389	414	426	398	382	374	375	1010	352	1060	1030	717
AC-FT	29580	26310	26610	25710	21950	23600	32120	65280	50080	67340	65630	48290

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)\*

	MEAN	680	526	525	494	492	523	848	1452	2451	2570	1307	940
MAX	1198	966	944	894	904	1638	3013	3162	6440	6556	3397	2113	
(WY)	1953	1952	1951	1952	1997	1997	1997	1997	1943	1943	1958	1958	
MIN	187	128	111	115	65.4	72.5	113	827	807	1017	685	582	
(WY)	1989	1989	1989	1989	1959	1959	1959	1995	1992	1993	1977	1988	

YELLOWSTONE RIVER BASIN

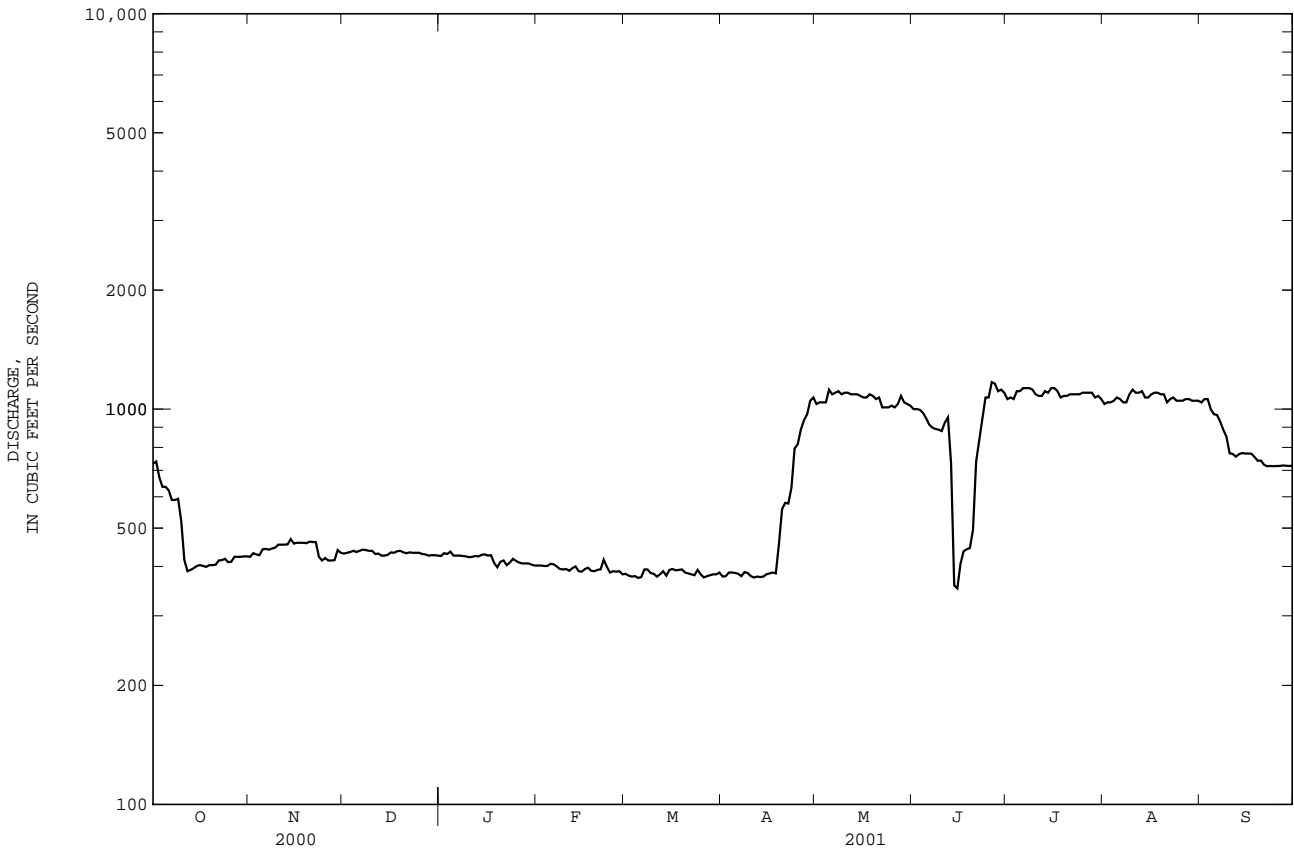
06282000 SHOSHONE RIVER BELOW BUFFALO BILL RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1943 - 2001*	
ANNUAL TOTAL	279879		243257		--	
ANNUAL MEAN	765		666		1070 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		1764	
LOWEST ANNUAL MEAN	--		--		556	
HIGHEST DAILY MEAN	1270	May 17	1170	Jun 26	15100	Jun 9 1981
LOWEST DAILY MEAN	389	Oct 12	352	Jun 15	59	Nov 19 1933#
ANNUAL SEVEN-DAY MINIMUM	397	Oct 12	378	Feb 28	64	Jan 21 1959
MAXIMUM PEAK FLOW	--		3120	Jun 13	17300	Jun 9 1981#
MAXIMUM PEAK STAGE	--		6.63	Jun 13	11.57	Jun 9 1981
ANNUAL RUNOFF (AC-FT)	555100		482500		775400	
10 PERCENT EXCEEDS	1230		1090		1860	
50 PERCENT EXCEEDS	461		446		840	
90 PERCENT EXCEEDS	410		385		312	

\* For period following Heart Mountain Diversion. See REMARKS.

# For period of record through 2001.

a Average discharge (water years 1922-1942) prior to Heart Mountain Diversion 1,256 ft<sup>3</sup>/s.



06284500 BITTER CREEK NEAR GARLAND, WY

LOCATION.--Lat 44°45'13", long 108°35'29", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.7, T.55 N., R.97 W., Big Horn County, Hydrologic Unit 10080014, 100 ft downstream from bridge on county road, 1.0 mi upstream from mouth, 4.0 mi southeast of Garland, and 5.0 mi southwest of Byron.

DRAINAGE AREA.--80.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1951-53, 1958-61, 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1969 to September 1983.

WATER TEMPERATURES: July 1969 to September 1983.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	
DEC 21...	1045	20	661	14.9	118	8.6	1260	-9.0	.00	.129	5.20	.031	.029
FEB 28...	1140	32	658	11.9	95	8.4	1240	-1.0	.00	.059	5.44	.049	.055
MAY 16...	0720	291	652	8.9	94	7.9	610	19.0	11.0	.081	2.23	.043	.128
JUL 31...	1310	343	654	8.4	102	8.0	629	26.0	17.0	<.040	2.63	.007	.061

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
DEC 21...	640	600
FEB 28...	E15k	E14k
MAY 16...	540	600
JUL 31...	340	300

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY

LOCATION.--Lat 44°50'19", long 108°26'04", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.17, T.56 N., R.96 W., Big Horn County, Hydrologic Unit 10080014, on left bank 20 ft downstream from bridge on County Road 9 and 1.5 mi west of Lovell.

DRAINAGE AREA.--2,350 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,850 ft above sea level, from topographic map. Prior to Oct. 1, 1976, at site 500 ft downstream, at datum 2.00 ft higher. Oct. 1, 1976 to Sept. 30, 1980, at site 500 ft downstream, at datum 1.00 ft higher. Oct. 1, 1981 to Nov. 13, 1986, at site 500 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Buffalo Bill Reservoir (station 06281500). Natural flow of stream affected by storage reservoirs, power development, diversions upstream from station for irrigation of about 143,000 acres, of which about 8,000 acres are downstream from station, and return flow from irrigated areas. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	628	590	621	579	547	518	545	e360	289	365	284	342
2	e760	604	616	580	553	511	532	e340	289	328	246	372
3	e690	591	619	e580	552	514	533	e350	366	247	240	427
4	e620	587	613	e570	547	509	534	e350	486	231	238	440
5	647	591	620	e580	559	514	533	e340	470	290	267	358
6	669	681	607	582	569	539	530	e340	419	213	293	444
7	612	719	621	577	520	592	523	e310	363	179	236	838
8	571	715	618	e560	e500	651	542	293	319	182	227	692
9	568	722	613	e540	e450	671	571	258	296	222	221	625
10	591	718	603	e560	e400	612	563	267	287	272	253	583
11	551	e700	494	569	e500	572	475	238	289	315	261	493
12	917	e640	319	577	e520	555	416	250	297	246	272	487
13	898	e600	328	573	e520	559	406	258	5080	235	308	439
14	696	e620	e360	572	e540	554	399	262	5710	245	317	431
15	636	e660	e430	577	e520	538	396	266	1240	284	295	476
16	612	e680	e470	579	e520	551	399	303	675	365	316	493
17	580	691	e540	e520	e500	550	402	288	540	320	327	505
18	551	694	e520	e540	e520	548	423	293	460	310	341	520
19	529	691	e620	554	e520	554	e360	311	412	292	384	541
20	513	686	e580	548	e580	566	e330	334	288	278	386	516
21	506	699	e550	564	e560	564	366	418	237	290	322	501
22	471	678	e500	562	e540	552	487	392	342	300	279	475
23	477	658	e540	533	e560	536	515	321	317	311	303	493
24	499	631	e560	554	e560	524	383	267	408	284	249	480
25	617	621	e580	563	e560	536	402	238	484	275	255	457
26	561	622	e580	556	e540	530	e350	249	393	266	317	450
27	504	623	e580	550	e520	540	e340	261	459	283	345	412
28	554	617	e580	e540	e500	532	e340	390	421	307	327	396
29	603	612	582	e540	---	532	e340	391	374	319	253	370
30	580	646	589	e550	---	537	e350	314	368	337	268	354
31	583	---	582	e560	---	537	---	302	---	321	299	---
TOTAL	18794	19587	17035	17389	14777	17098	13285	9554	22378	8712	8929	14410
MEAN	606	653	550	561	528	552	443	308	746	281	288	480
MAX	917	722	621	582	580	671	571	418	5710	365	386	838
MIN	471	587	319	520	400	509	330	238	237	179	221	342
AC-FT	37280	38850	33790	34490	29310	33910	26350	18950	44390	17280	17710	28580

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2001, BY WATER YEAR (WY)

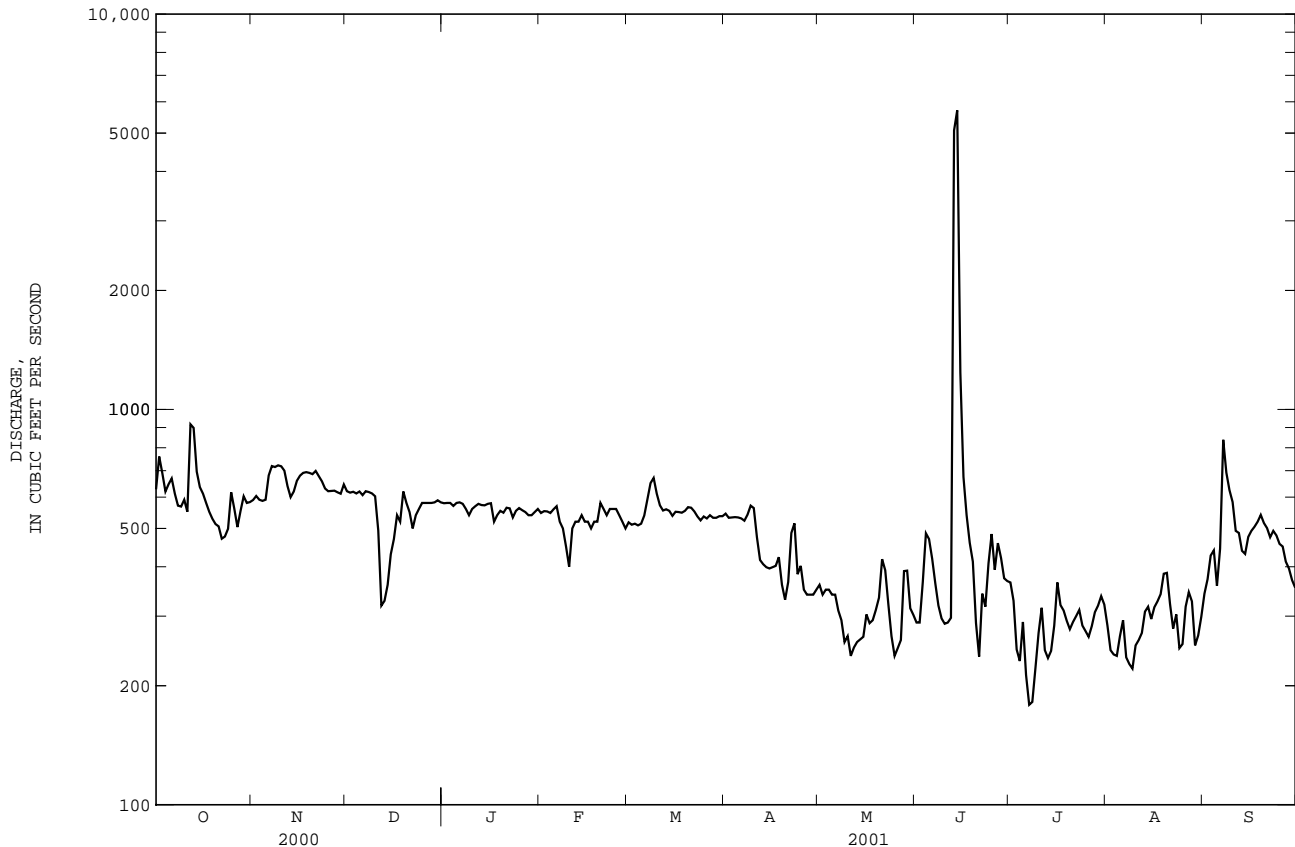
	773	723	655	588	610	683	818	897	1903	1784	742	779
MEAN	773	723	655	588	610	683	818	897	1903	1784	742	779
MAX	1251	1146	1168	1065	1139	1951	3353	2925	4935	4686	1305	1354
(WY)	1972	1969	1969	1973	1973	1997	1997	1996	1981	1982	1982	1991
MIN	369	297	306	226	228	243	248	193	203	149	207	245
(WY)	1989	1986	1995	1991	1989	1995	1981	1977	1977	1977	1977	1977

## 06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1967 - 2001	
ANNUAL TOTAL	234372		181948		--	
ANNUAL MEAN	640		498		914	
HIGHEST ANNUAL MEAN	--		--		1659	1997
LOWEST ANNUAL MEAN	--		--		359	1988
HIGHEST DAILY MEAN	1760	May 18	5710	Jun 14	15200	Jun 10 1981
LOWEST DAILY MEAN	218	Jul 14	179	Jul 7	27	May 31 1977
ANNUAL SEVEN-DAY MINIMUM	279	Jul 11	223	Jul 3	48	May 30 1977
MAXIMUM PEAK FLOW	--		9680	Jun 13	16400 <sup>a</sup>	Jun 10 1981
MAXIMUM PEAK STAGE	--		11.27	Jun 13	11.27	Jun 13 2001
ANNUAL RUNOFF (AC-FT)	464900		360900		661800	
10 PERCENT EXCEEDS	857		624		1510	
50 PERCENT EXCEEDS	600		514		671	
90 PERCENT EXCEEDS	470		272		333	

a Gage height, 9.16 ft, site then in use, at present datum.

e Estimated.



## YELLOWSTONE RIVER BASIN

06285100 SHOSHONE RIVER NEAR LOVELL, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-97, October 1999 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1966 to September 1983.

WATER TEMPERATURES: October 1966 to September 1983.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
DEC 21...	1405	549	666	14.9	117	8.4	834	-4.0	.00	<.041	.913	.008	<.018
FEB 28...	0940	481	665	10.9	86	8.2	784	-2.5	.00	<.041	.530	E.005	<.018
MAY 15...	1915	279	659	8.4	102	8.4	719	20.0	17.5	<.040	1.75	.038	.065
JUL 30...	1730	300	658	9.5	128	8.5	737	21.5	22.5	<.040	1.53	.015	.029

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
DEC 21...	E8k	E12k
FEB 28...	E11k	E11k
MAY 15...	350	430
JUL 30...	260	470

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).



06286400 BIGHORN LAKE NEAR ST. XAVIER, MT

LOCATION.--Lat 45 18'27", long 107 57'26", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.18, T.6 S., R.30 E., Big Horn County, Hydrologic Unit 10080010, in block 13 of Yellowtail Dam on Bighorn River, 1.3 mi upstream from Grapevine Creek, 15.5 mi southwest of St. Xavier, and at river mile 86.6.

DRAINAGE AREA.--19,626 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1965 to current year (monthend contents only). Prior to October 1969, published as "Yellowtail Reservoir." Records of daily elevations and contents on file at the U. S. Geological Survey office in Helena, Montana.

GAGE.--Water-stage recorder in powerhouse control room. Datum of gage is referenced to sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by thin concrete-arch dam; construction began in 1961; completed in 1967. Storage began Nov. 3, 1965. Usable capacity, 1,312,000 acre-ft, between elevation 3,296.50 ft, river outlet invert, and 3,657.00 ft, top of flood control. Elevation of spillway crest, 3,593.00 ft. Normal maximum operating level, 1,097,000 acre-ft, elevation, 3,640.00 ft. Minimum operating level, 483,400 acre-ft, elevation, 3,547.00 ft. Dead storage, 16,010 acre-ft, below elevation 3,296.50 ft. Figures given herein represent usable contents. Water is used for power production, flood control, irrigation, and recreation.

COOPERATION.--Elevations and capacity table furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,346,000 acre-ft, July 6, 1967, elevation, 3,656.43 ft; minimum since first filling, 641,900 acre-ft, Apr. 14, 1989, elevation 3,583.30 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 900,000 acre-ft, Nov. 8-10, elevation, 3,625.21 ft; minimum, 739,300 acre-ft, Sept. 6, elevation, 3,601.92 ft.

## MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Date	Elevation (feet)	Contents (acre-feet)	Change in Contents (acre-feet)
Sept. 30 .....	3,621.25	867,300	--
Oct. 31 .....	3,625.01	898,200	+30,900
Nov. 30 .....	3,624.18	891,200	-7,000
Dec. 31 .....	3,622.95	881,000	-10,200
CAL YR 2000			-79,300
Jan. 31 .....	3,620.95	865,000	-16,000
Feb. 28 .....	3,618.00	842,400	-22,600
Mar. 31 .....	3,619.55	854,100	+11,700
Apr. 30 .....	3,617.83	841,200	-12,900
May 31 .....	3,617.63	839,700	-1,500
June 30 .....	3,620.41	860,700	+21,000
July 31 .....	3,612.59	804,100	-56,600
Aug. 31 .....	3,602.86	744,600	-59,500
Sept. 30 .....	3,602.82	744,400	-200
WTR YR 2001			-122,900

## YELLOWSTONE RIVER BASIN

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT

LOCATION.--Lat 45°19'00", long 107°55'05", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.16, T.6 S., R.31 E., Big Horn County, Hydrologic Unit 10080015, on right bank 800 ft downstream from Yellowtail afterbay dam, 1,500 ft downstream from Lime Kiln Creek, 14 mi southwest of St. Xavier, and at river mile 83.9.

DRAINAGE AREA.--19,667 mi<sup>2</sup>. Area at site used prior to Apr. 16, 1963, 19,626 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,158.38 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Apr. 16, 1963, and June 13, 1964, to Mar. 31, 1965, water-stage recorder at site 1.2 mi upstream at different datum. Apr. 1, 1965, to July 31, 1966, water-stage recorder at site 1,300 ft downstream at present datum.

REMARKS.--Records fair. Figures of discharge given herein are sum of river flow and flow of Bighorn Canal. Some regulation by 14 reservoirs in Wyoming with combined capacity of 1,400,000 acre-ft and complete regulation by Bighorn Lake (see station 06286400) since Nov. 3, 1965. Diversions for irrigation of about 375,000 acres upstream from station. Bureau of Reclamation satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	2020	1970	2160	2310	2010	1980	2000	2330	2300	2370	1950
2	2270	2030	1960	2150	2230	2010	1970	2010	2330	2310	2320	1910
3	2240	2040	1960	2170	2190	2010	1980	1990	2330	2320	2280	1880
4	2240	2030	1940	2180	2200	2010	1970	2000	2330	2310	2220	1860
5	2220	2080	1950	2190	2210	2010	1980	2010	2310	2320	2220	1850
6	2220	2060	1960	2200	2210	2010	1980	2000	2330	2320	2220	1850
7	2190	2070	1960	2210	2240	2010	1970	1990	2320	2320	2230	1840
8	2190	2070	1950	2210	2250	2020	1980	2000	2320	2330	2230	1790
9	2170	2080	1960	2190	2260	2020	1990	1920	2320	2310	2240	1790
10	2210	2100	1960	2010	2280	2010	1990	2140	2320	2310	2250	1780
11	2340	2120	1970	2010	2300	2020	1970	2240	2330	2320	2240	1770
12	2310	2110	1980	2020	2300	2010	1970	2230	2320	2340	2230	1770
13	2310	2120	1980	2040	2310	2010	1980	2240	2290	2340	2220	1760
14	2290	2130	1990	2050	2330	2020	1990	2170	2200	2340	2120	1760
15	2280	2130	2000	2070	2330	2020	1990	2200	2170	2340	2110	1760
16	2270	2130	2020	2090	2360	2010	1990	2190	2180	2350	2100	1760
17	2240	2150	2010	2100	2360	2020	1970	2180	2160	2340	2110	1730
18	2030	2160	2040	2110	2390	2010	1990	2280	2120	2340	2110	1690
19	1220	2160	2010	2100	2400	2020	1990	2280	2070	2330	2100	1690
20	2110	2170	2050	2090	2390	2050	1990	2290	2080	2340	2080	1640
21	1950	2190	2060	2100	2320	2020	1980	2320	2070	2340	2070	1660
22	1940	2200	2050	2100	2320	2020	1990	2370	2060	2340	2080	1720
23	1920	2200	2070	2120	2360	2020	1980	2390	2050	2350	2070	1720
24	1900	2210	2100	2190	2360	2020	1990	2390	2050	2370	2070	1680
25	1890	2210	2080	2210	2380	2030	1990	2380	2120	2380	2070	1640
26	1880	2230	2090	2220	2330	2020	1980	2370	2270	2390	2060	1650
27	1870	2230	2110	2240	2150	2010	1970	2380	2310	2400	2050	1630
28	1850	2230	2100	2250	2000	1990	1990	2370	2320	2390	2040	1620
29	1840	2220	2110	2240	---	2000	2020	2380	2300	2410	2040	1610
30	1880	2150	2120	2260	---	1980	2010	2350	2320	2420	2030	1590
31	2010	---	2130	2300	---	1990	---	2320	---	2420	1980	---
TOTAL	64550	64030	62640	66580	64070	62410	59520	68380	67030	72740	66560	52350
MEAN	2082	2134	2021	2148	2288	2013	1984	2206	2234	2346	2147	1745
MAX	2340	2230	2130	2300	2400	2050	2020	2390	2330	2420	2370	

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2001, BY WATER YEAR (WY)

MEAN	2980	2933	2741	2606	2672	2929	2915	3869	7140	5577	2900	2744
MAX	5142	5151	4999	5267	4384	4809	6675	8744	17900	18890	6784	4544
(WY)	1972	1983	1968	1968	1976	1976	1972	1947	1935	1967	1997	1973
MIN	1224	1085	1095	1090	888	327	678	900	1078	1144	1260	1074
(WY)	1978	1978	1935	1935	1936	1966	1966	1966	1966	1960	1966	1966

06287000 BIGHORN RIVER NEAR ST. XAVIER, MT--Continued

## SUMMARY STATISTICS

WATER YEARS 1935 - 1961\*

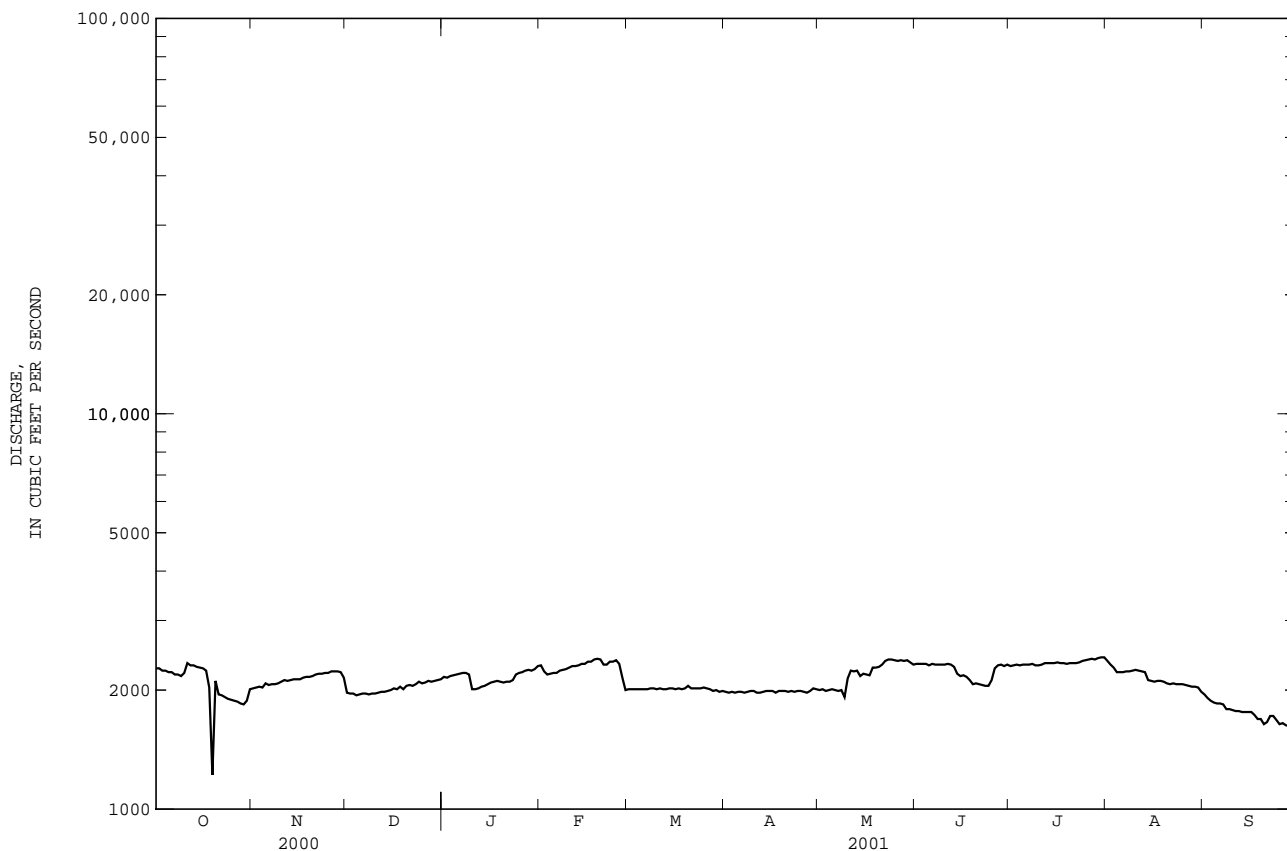
WATER YEARS 1967 - 2001\*\*

ANNUAL MEAN	3426		3546	
HIGHEST ANNUAL MEAN	5059	1947	4839	1999
LOWEST ANNUAL MEAN	1706	1961	1868	1989
HIGHEST DAILY MEAN	37400	Jun 16 1935	24800	Jul 6 1967
LOWEST DAILY MEAN	300	Dec 20 1951	112	Apr 2 1967
ANNUAL SEVEN-DAY MINIMUM	656	Dec 25 1934	518	Mar 25 1970
INSTANTANEOUS PEAK FLOW	37400	Jun 16 1935	25300	Jul 5 1967
INSTANTANEOUS LOW FLOW	228	Dec 9 1937	112 <sup>a</sup>	Apr 2 1967
ANNUAL RUNOFF (AC-FT)	2482000		2569000	
10 PERCENT EXCEEDS	6440		5550	
50 PERCENT EXCEEDS	2450		3170	
90 PERCENT EXCEEDS	1370		1920	

\* Prior to construction of Yellowtail Dam.

\*\* After completion of Yellowtail Dam.

a Result of discharge measurement.



## YELLOWSTONE RIVER BASIN

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT

LOCATION.--Lat 45°00'25", long 107°36'52", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.36, T.9 S., R.33 E., Bighorn County, Hydrologic Unit 10080016, on right bank 20 ft downstream from county bridge, 0.5 mi north of Wyoming-Montana State line, 1 mi downstream from West Fork, 13 mi southwest of Wyola, and at river mile 115.2.

DRAINAGE AREA.--193 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1939 to current year. Prior to October 1940, published as Little Horn River at State Line, near Wyola.

REVISED RECORDS.--WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,350 ft above sea level, from topographic map.

REMARKS.--Records good. Diversions for irrigation of 163 acres upstream from station. Station operated and record by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	75	69	68	73	65	61	129	187	106	79	65
2	86	70	69	67	69	64	61	105	184	106	77	63
3	78	68	69	68	69	64	60	98	179	109	77	62
4	78	73	68	68	68	63	60	91	173	108	77	61
5	76	76	69	69	69	63	60	100	165	107	77	61
6	71	69	69	69	69	63	60	116	157	108	75	70
7	68	65	69	67	64	62	61	102	149	e102	74	78
8	74	60	69	65	48	63	63	107	146	e100	74	74
9	74	69	67	70	52	63	60	136	147	e97	74	69
10	75	60	e44	69	62	63	60	153	143	e93	75	69
11	78	47	e39	69	63	62	60	157	140	103	74	67
12	77	48	e43	69	64	63	60	207	140	101	73	66
13	76	51	e46	69	64	62	59	295	e150	100	73	65
14	75	57	64	68	58	63	60	385	e160	98	73	67
15	74	70	75	67	62	61	59	451	e170	98	73	67
16	74	66	e60	58	55	60	59	430	e162	98	72	64
17	77	72	76	61	63	62	59	354	e160	98	72	64
18	77	79	77	75	70	62	65	304	e160	95	70	63
19	78	83	79	69	72	62	71	293	e150	93	70	62
20	78	76	75	69	68	63	72	292	e140	90	70	61
21	80	75	e58	67	67	62	67	228	e137	89	69	60
22	80	73	78	67	66	61	65	211	e135	89	69	60
23	79	71	74	67	64	61	63	239	e131	89	69	60
24	80	70	71	62	65	60	64	254	e125	88	67	59
25	82	70	70	70	64	61	69	251	e118	85	66	59
26	80	70	69	68	63	61	78	248	e113	85	65	59
27	78	70	69	59	61	62	91	251	112	85	65	59
28	78	70	69	60	61	60	102	227	110	82	65	59
29	77	68	68	63	---	61	113	223	108	80	65	58
30	76	70	70	71	---	61	116	210	107	80	65	57
31	76	---	69	74	---	60	---	194	---	80	65	---
TOTAL	2399	2041	2061	2082	1793	1923	2058	6841	4358	2942	2209	1908
MEAN	77.4	68.0	66.5	67.2	64.0	62.0	68.6	221	145	94.9	71.3	63.6
MAX	89	83	79	75	73	65	116	451	187	109	79	78
MIN	68	47	39	58	48	60	59	91	107	80	65	57
AC-FT	4760	4050	4090	4130	3560	3810	4080	13570	8640	5840	4380	3780

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	MEAN	87.3	76.2	68.4	63.2	61.9	62.0	85.4	327	523	222	124	98.5
	MAX	120	104	91.2	84.9	88.0	86.4	172	533	1125	689	228	151
	(WY)	1976	1942	1976	1946	1946	1946	1946	1977	1975	1975	1975	1975
	MIN	64.0	55.2	48.3	43.6	47.8	48.6	50.7	127	145	94.9	69.8	63.6
	(WY)	1961	1986	1990	1963	1990	1961	1961	1953	2001	2001	1961	2001

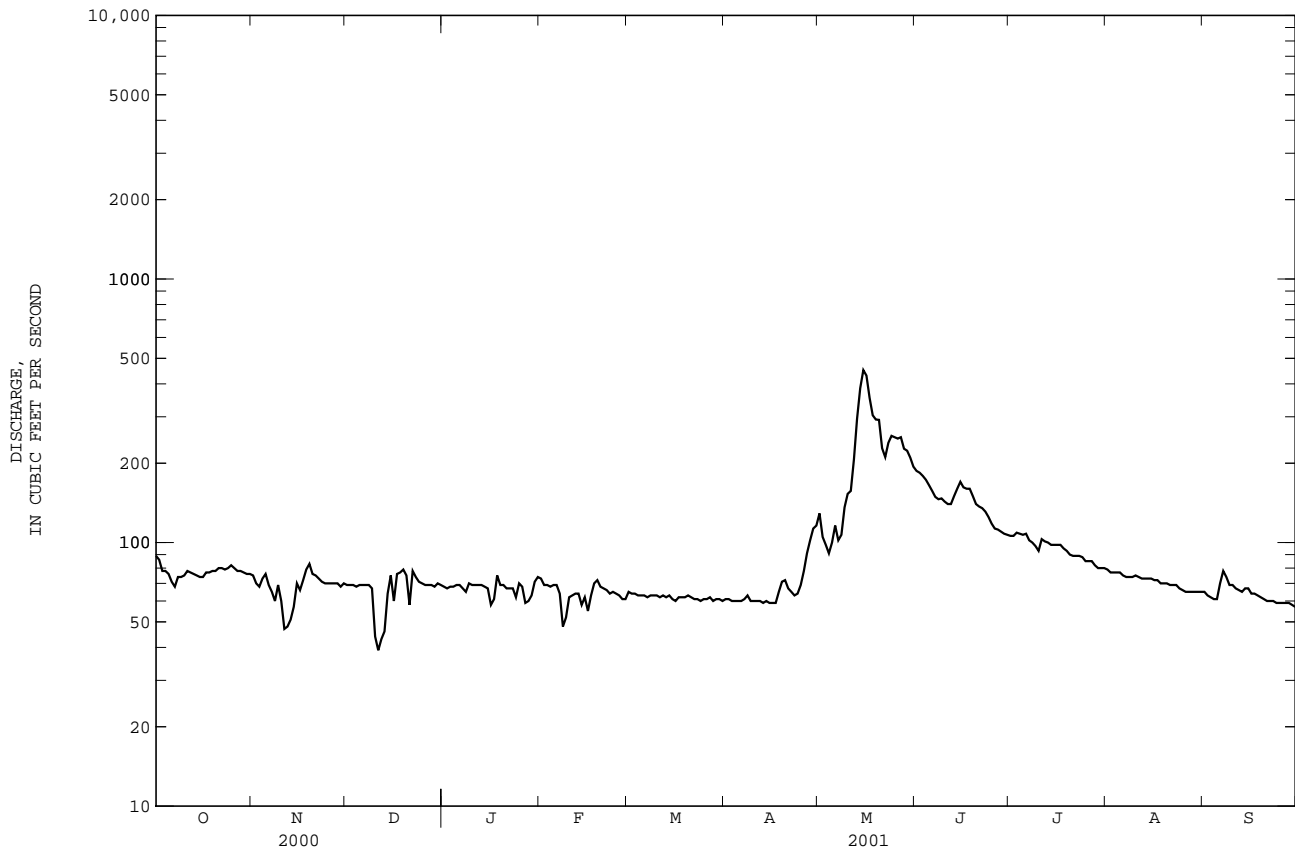
06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1940 - 2001	
ANNUAL TOTAL	50677		32615.0		--	
ANNUAL MEAN	138		89.4		150	
HIGHEST ANNUAL MEAN	--		--		253	
LOWEST ANNUAL MEAN	--		--		89.4	
HIGHEST DAILY MEAN	923	May 28	451	May 15	2340	Jun 4 1944
LOWEST DAILY MEAN	39	Dec 11	39	Dec 11	18	Feb 2 1989
ANNUAL SEVEN-DAY MINIMUM	53	Dec 10	53	Dec 10	27	Dec 18 1983
MAXIMUM PEAK FLOW	--		555		2730 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		3.07		5.93 <sup>b</sup>	
ANNUAL RUNOFF (AC-FT)	100500		64690		108400	
10 PERCENT EXCEEDS	293		148		339	
50 PERCENT EXCEEDS	78		70		84	
90 PERCENT EXCEEDS	64		60		57	

a Gage height, 4.97 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s.

b Result of log jam.

e Estimated.



## YELLOWSTONE RIVER BASIN

06289000 LITTLE BIGHORN RIVER AT STATE LINE, NEAR WYOLA, MT--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1993 to August 2001, discontinued.

REMARKS.--Unpublished records of instantaneous water temperature and specific conductance are available in files of the Montana District office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)			
NOV 2000 29...	0900	60	8.4	359	0.0	1.0	.18	<.006	<.018	<.06			
MAR 2001 21...	0900	61	8.6	340	7.0	6.5	.14	<.006	<.018	<.06			
APR 17...	0900	59	8.2	343	8.0	2.5	.090	<.006	<.018	<.06			
MAY 02...	0940	98	8.3	310	7.0	5.0	.101	<.006	<.018	<.06			
JUN 12...	1000	141	8.5	293	12.0	6.0	E.045	<.006	<.020	<.06			
AUG 07...	0930	73	8.6	267	29.0	15.5	.074	<.006	<.020	<.06			
		DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	FECAL STREP, KF STRP MF, WATER (COL/100 ML) (31673)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)						
		NOV 2000 29...	E1	E5	68	17	2.8						
		MAR 21...	E4	<1	77	17	2.8						
		APR 17...	<1	E20	43	36	5.7						
		MAY 02...	E1	E1	77	18	4.8						
		JUN 12...	--	--	74	30	11						
		AUG 07...	E12	33	47	26	5.1						
DATE	TIME	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
MAR 2001 21...	0900	180	44	17	.54	.0	1.3	185	.9	E.1	5.8	9.5	
AUG 07...	0930	180	44	17	.66	.0	1.5	176	.7	.2	6.0	8.6	
DATE		SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L AS AS) (70301)	ARSENIC TOTAL (UG/L AS AS) (01002)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL RECOV-ERABLE (UG/L AS SE) (01147)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
MAR 2001 21...	.26	31.4	191	<2	<.11	<1	<1.8	<10	<1	<2	<2.6	<31	
AUG 07...	.25	36.3	184	<2	<.10	<1	<1.0	20	<1	<2	<3.0	<31	

E--Estimated.

06289600 WEST PASS CREEK NEAR PARKMAN, WY

LOCATION.--Lat 44°59'16", long 107°28'56", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.21, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank, anchored to concrete headwall of culvert on county road and 7.6 mi northwest of Parkman.

DRAINAGE AREA.--15.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to current year (no winter records water years 1985-87).

GAGE.--Water-stage recorder. Elevation of gage is 4,220 ft above sea level, from topographic map. Prior to Apr. 2, 1985, at site 100 ft north (on abandoned channel) at datum 4.28 ft lower. Apr. 2, 1985 to Mar. 27, 1986, at site 300 ft upstream at datum 0.95 ft higher. Apr. 2, 1985 to Sept. 30, 1998, at same site at datum 1.00 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	7.0	e6.6	e5.6	5.5	e5.2	6.5	14	9.4	6.5	4.9	4.2
2	7.4	7.0	e6.6	e5.6	5.3	e5.4	6.3	14	9.4	6.5	4.9	4.1
3	7.2	6.8	e6.8	e5.6	5.3	e5.6	6.4	14	9.3	6.5	4.8	4.1
4	7.3	6.8	e6.8	e5.8	5.2	e5.6	6.9	14	9.4	6.3	4.8	4.1
5	7.5	6.9	e6.6	e5.8	5.6	e5.8	6.3	15	8.9	6.3	4.8	4.3
6	7.2	6.7	e6.4	e5.8	5.3	e5.8	6.4	17	8.6	6.3	4.7	5.0
7	7.2	e6.4	e6.8	e5.6	4.9	e6.0	6.8	15	8.4	6.2	4.8	5.7
8	7.2	e6.0	e6.4	e5.6	e4.8	e6.0	9.0	15	8.4	6.2	4.6	5.3
9	7.2	e6.2	e6.2	e5.6	e4.6	e6.2	7.7	16	8.1	6.3	4.6	4.7
10	7.2	e5.6	e6.0	5.5	e4.7	e6.0	6.6	16	7.8	6.5	4.7	4.7
11	7.1	e5.0	e6.0	5.5	e4.9	e5.8	6.4	15	7.4	6.0	4.7	4.6
12	7.2	e6.0	e5.4	5.5	e5.0	e5.8	6.3	15	7.5	5.9	4.7	4.7
13	7.0	e7.0	e6.0	5.5	e5.0	e6.0	6.2	15	7.9	5.9	4.7	4.8
14	7.2	e8.0	e6.2	5.5	e5.0	e6.0	6.2	16	8.8	5.8	4.7	5.0
15	7.0	8.2	e6.4	5.5	e5.0	e5.6	6.2	17	8.2	5.9	4.7	4.9
16	7.0	3.8	e6.2	5.3	e5.0	e5.8	6.1	18	8.2	5.8	4.7	4.9
17	7.0	4.2	e6.0	5.3	e5.0	e5.8	6.2	19	8.1	5.8	4.6	4.8
18	7.0	6.0	e6.0	5.3	e5.2	e6.0	6.3	19	8.1	5.6	4.6	4.8
19	7.0	6.6	e6.0	5.3	e5.2	e6.0	6.5	18	7.9	5.7	4.6	4.7
20	7.0	7.0	e6.0	5.3	e5.4	e6.0	6.9	18	7.7	5.6	4.7	4.5
21	6.9	7.0	e5.8	5.3	e5.6	e6.2	8.1	16	7.5	5.6	4.7	4.6
22	7.0	7.0	e5.8	5.5	e5.6	e6.2	8.1	16	7.4	5.4	4.6	4.5
23	7.1	7.0	e5.8	5.5	e5.6	e6.0	7.6	15	7.3	5.5	4.6	4.5
24	7.0	7.2	e5.8	5.5	e5.6	e6.0	7.4	14	7.6	5.4	4.4	4.5
25	7.3	7.2	e5.8	5.5	e5.6	e5.8	7.4	13	7.5	5.2	4.3	4.5
26	7.1	7.2	e5.8	5.5	e5.4	e6.2	8.0	12	7.1	5.3	4.3	4.5
27	7.0	7.2	e5.8	5.5	e5.2	6.3	8.8	12	7.0	5.1	4.1	4.5
28	7.0	7.2	e6.0	5.4	e5.2	5.9	9.6	11	7.0	5.0	4.1	4.5
29	7.0	e7.0	e5.8	e5.2	---	5.9	11	11	6.8	4.9	4.1	4.5
30	7.0	e6.8	e5.6	e5.4	---	6.1	11	11	6.6	5.0	4.2	4.5
31	7.0	---	e5.6	5.4	---	6.0	---	9.9	---	5.0	4.3	---
TOTAL	220.9	198.0	189.0	170.2	145.7	183.0	219.2	460.9	239.3	179.0	142.0	139.0
MEAN	7.13	6.60	6.10	5.49	5.20	5.90	7.31	14.9	7.98	5.77	4.58	4.63
MAX	7.6	8.2	6.8	5.8	5.6	6.3	11	19	9.4	6.5	4.9	5.7
MIN	6.9	3.8	5.4	5.2	4.6	5.2	6.1	9.9	6.6	4.9	4.1	4.1
AC-FT	438	393	375	338	289	363	435	914	475	355	282	276

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2001, BY WATER YEAR (WY)\*

MEAN	7.89	7.56	6.65	6.45	6.23	7.47	13.4	33.6	25.0	13.1	8.93	7.87
MAX	9.95	9.30	9.02	8.10	7.98	10.5	25.2	79.9	60.6	26.9	14.9	11.6
(WY)	1996	1996	1996	1996	1996	1997	1994	1995	1995	1995	1995	1995
MIN	5.76	6.34	4.92	4.25	4.02	5.64	7.31	13.0	7.82	5.21	4.58	4.63
(WY)	1990	1990	1991	1988	1989	1991	2001	1985	1985	1985	2001	2001

## YELLOWSTONE RIVER BASIN

06289600 WEST PASS CREEK NEAR PARKMAN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1983 - 2001*	
ANNUAL TOTAL	3768.8		2486.2		--	
ANNUAL MEAN	10.3		6.81		12.6	
HIGHEST ANNUAL MEAN	--		--		21.2	
LOWEST ANNUAL MEAN	--		--		6.81	
HIGHEST DAILY MEAN	138	May 17	19	May 17	291	May 9 1995
LOWEST DAILY MEAN	3.8	Nov 16	3.8	Nov 16	.00 <sup>a</sup>	Dec 25 1998
ANNUAL SEVEN-DAY MINIMUM	5.3	Jan 29	4.2	Aug 27	.81	Feb 3 1989
MAXIMUM PEAK FLOW	--		19 <sup>b</sup>	May 6	340	May 9 1995
MAXIMUM PEAK STAGE	--		2.07 <sup>c</sup>	Nov 29	4.76 <sup>d</sup>	Apr 28 1984
ANNUAL RUNOFF (AC-FT)	7480		4930		9140	
10 PERCENT EXCEEDS	17		9.4		24	
50 PERCENT EXCEEDS	7.0		6.0		8.2	
90 PERCENT EXCEEDS	6.0		4.7		5.7	

\* For period of operation.

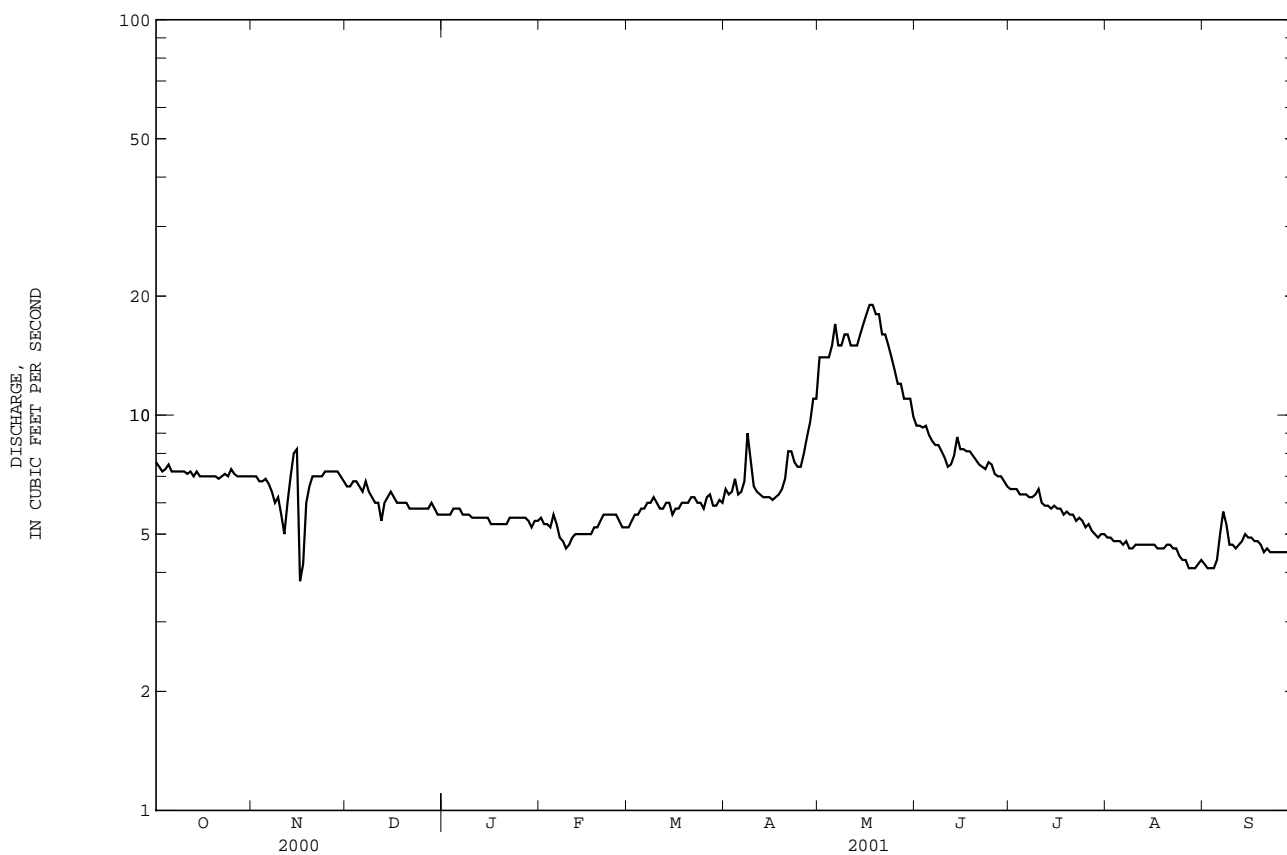
a Result of channel blockage or diversion upstream.

b Gage height, 1.92 ft.

c Backwater from ice, highest recorded gage height.

d Backwater from ice, site and datum then in use.

e Estimated.





06289820 EAST PASS CREEK NEAR DAYTON, WY

LOCATION.--Lat 44°59'26", long 107°25'20", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.24, T.58 N., R.88 W., Sheridan County, Hydrologic Unit 10080016, on right bank 0.4 mi downstream from bridge on Sheridan County Road 144, 5.0 mi northwest of Parkman, and 11.2 mi northwest of Dayton.

DRAINAGE AREA.--21.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,405 ft above sea level, from topographic map. October 1982 to August 1995, at site 270 ft upstream at different datum. August 1995 to April 1996, at site 0.3 mi downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Several small reservoirs upstream from station, combined capacity, 415 acre-ft, for irrigation. Diversions for irrigation of about 2,900 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	8.8	7.4	8.0	8.7	8.1	9.4	19	9.3	7.2	5.2	4.1
2	7.3	8.7	7.3	8.0	8.5	8.4	9.6	17	9.8	6.7	4.8	4.0
3	6.9	8.5	7.4	8.0	8.1	8.2	9.4	15	9.8	6.7	3.8	4.0
4	6.8	8.6	7.2	8.9	8.0	9.0	9.5	13	10	6.7	3.9	3.9
5	7.0	8.7	7.3	10	8.2	9.5	9.7	13	12	6.4	4.0	4.1
6	6.2	8.5	7.2	10	8.1	10	12	14	12	6.5	4.1	5.2
7	6.3	8.2	7.7	9.1	7.6	12	11	14	12	6.7	4.1	6.1
8	6.6	8.0	7.4	8.8	e6.0	11	10	13	10	6.7	3.9	6.2
9	6.9	8.3	6.6	8.6	e7.0	10	10	14	7.9	6.6	3.8	5.6
10	9.0	7.7	4.4	8.7	e7.4	13	9.6	16	7.7	6.6	3.7	5.3
11	9.2	7.0	5.0	8.7	e7.8	14	9.2	16	7.4	6.4	3.5	5.0
12	9.7	7.8	5.6	8.4	e8.2	11	9.3	18	7.7	6.3	3.3	4.8
13	9.7	8.3	e6.6	8.4	e8.2	11	9.0	22	9.9	6.5	3.4	4.9
14	9.7	8.1	e9.0	8.4	e8.0	10	8.9	30	11	6.5	3.4	5.1
15	9.5	7.7	e8.0	8.3	e8.0	11	8.8	34	10	6.7	3.2	5.1
16	8.7	7.4	e6.4	e7.2	e7.8	11	9.3	31	9.6	6.7	3.0	5.0
17	8.4	7.6	e8.5	e7.8	e8.0	12	10	29	9.4	6.4	3.0	5.0
18	8.4	7.4	e8.0	e8.5	e8.6	12	11	25	9.2	6.2	3.2	5.0
19	8.4	7.4	e7.8	8.2	e9.0	12	12	23	8.7	6.5	3.2	4.9
20	8.5	7.4	e7.8	8.2	9.2	12	11	24	7.5	6.5	3.8	5.0
21	8.4	7.2	e7.2	8.1	8.1	11	11	21	7.5	6.3	4.5	4.9
22	8.5	7.1	e7.4	8.0	7.9	9.6	10	19	7.2	6.4	4.4	4.9
23	9.0	7.1	e7.8	8.3	8.0	9.4	11	18	7.2	7.0	4.3	5.1
24	9.4	7.1	e7.8	8.3	e8.0	9.6	12	17	7.7	6.5	4.3	5.3
25	9.8	7.4	8.0	8.6	e7.8	9.9	15	16	7.7	6.1	4.2	5.5
26	9.1	7.4	7.7	8.0	e7.6	9.4	18	13	7.4	6.3	4.3	5.3
27	9.0	7.5	8.0	7.9	e7.0	9.4	19	14	7.4	5.9	4.0	5.0
28	9.0	7.4	8.0	7.7	e7.8	9.5	18	13	7.1	5.8	3.8	5.0
29	9.0	7.2	7.7	8.9	---	9.2	19	12	6.7	5.5	3.9	5.1
30	8.7	7.5	7.7	8.5	---	9.4	18	9.8	6.7	5.2	4.2	5.0
31	8.8	---	7.7	8.5	---	9.4	---	9.3	---	5.2	4.2	---
TOTAL	259.5	233.0	227.6	261.0	222.6	321.0	349.7	562.1	263.5	197.7	120.4	149.4
MEAN	8.37	7.77	7.34	8.42	7.95	10.4	11.7	18.1	8.78	6.38	3.88	4.98
MAX	9.8	8.8	9.0	10	9.2	14	19	34	12	7.2	5.2	6.2
MIN	6.2	7.0	4.4	7.2	6.0	8.1	8.8	9.3	6.7	5.2	3.0	3.9
AC-FT	515	462	451	518	442	637	694	1110	523	392	239	296

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2001, BY WATER YEAR (WY)

	MEAN	8.97	9.01	8.47	8.64	8.59	9.91	16.8	44.2	36.3	13.3	7.41	7.38
MAX	13.9	11.4	10.5	10.5	10.6	14.2	32.4	90.8	82.8	32.9	14.8	14.8	
(WY)	1996	1996	1996	1996	1996	1997	1994	1995	1995	1992	1993	1995	
MIN	5.73	6.90	6.69	6.96	6.78	7.29	9.30	15.2	6.65	5.06	2.73	4.02	
(WY)	1991	1986	1988	1988	1989	1990	1992	1985	1985	1985	1988	1989	

## YELLOWSTONE RIVER BASIN

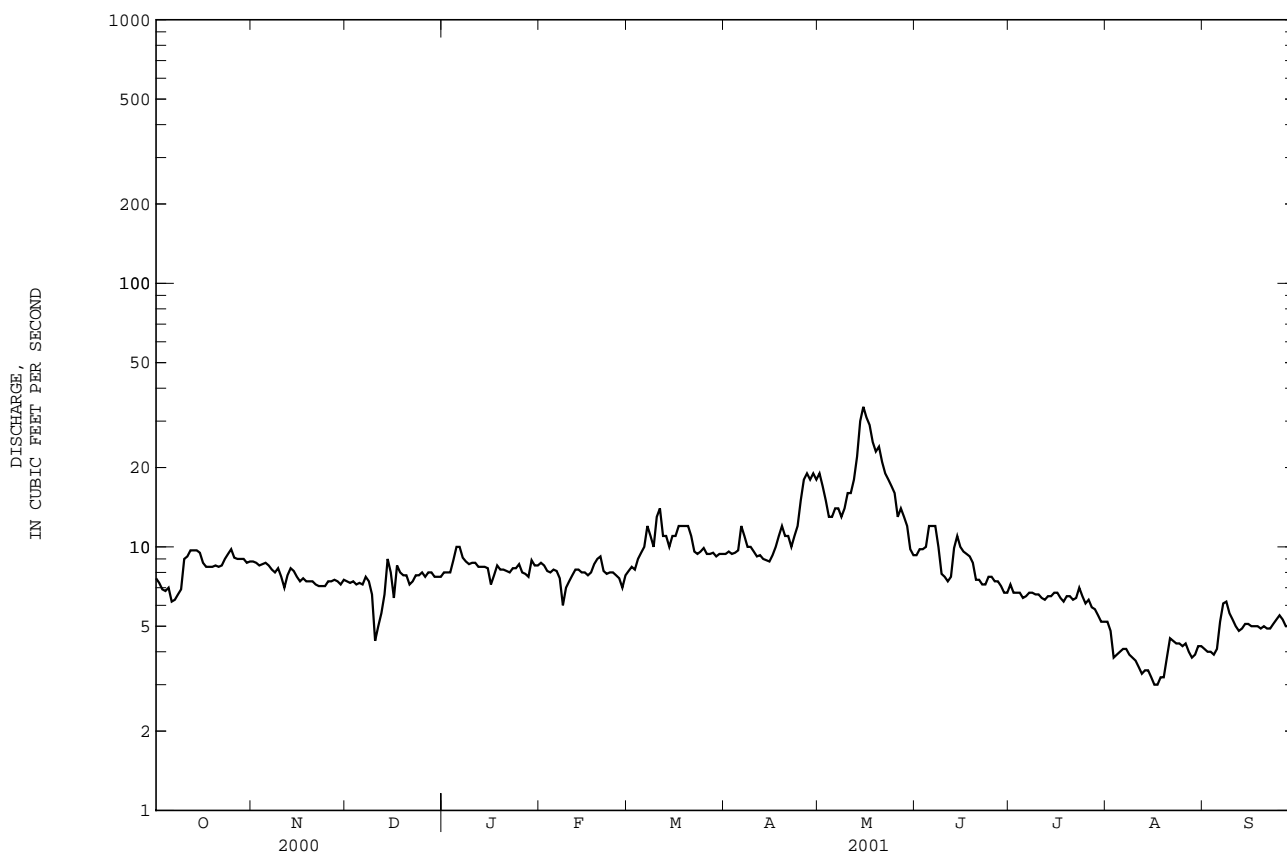
06289820 EAST PASS CREEK NEAR DAYTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1983 - 2001	
ANNUAL TOTAL	4675.3		3167.5		--	
ANNUAL MEAN	12.8		8.68		14.9	
HIGHEST ANNUAL MEAN	--		--		23.6	
LOWEST ANNUAL MEAN	--		--		8.57	
HIGHEST DAILY MEAN	180	May 18	34	May 15	304	May 9 1995
LOWEST DAILY MEAN	3.6	Jul 31, Aug 2,3	3.0	Aug 16-17	1.6	Sep 1 1999
ANNUAL SEVEN-DAY MINIMUM	3.8	Jul 29	3.2	Aug 13	2.1	Aug 20 1988
MAXIMUM PEAK FLOW	--		37	May 15	511 <sup>a</sup>	May 9 1995
MAXIMUM PEAK STAGE	--		5.93	May 15	9.00 <sup>b</sup>	Feb 6 1996
ANNUAL RUNOFF (AC-FT)	9270		6280		10810	
10 PERCENT EXCEEDS	21		12		30	
50 PERCENT EXCEEDS	8.0		8.0		9.3	
90 PERCENT EXCEEDS	5.8		4.8		6.2	

a Gage height, 4.47 ft, site and datum then in use, from rating curve extended above 221 ft<sup>3</sup>/s.

b Ice jam, site and datum then in use.

e Estimated.



06298000 TONGUE RIVER NEAR DAYTON, WY

LOCATION.--Lat 44°50'58", long 107°18'14", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.11, T.56 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, on left bank 0.5 mi upstream from Crystal Draw, 0.6 mi downstream from intake of Highline Ditch, and 2.5 mi southwest of Dayton.

DRAINAGE AREA.--204 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to September 1929, October 1940 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1921.

GAGE.--Water-stage recorder. Elevation of gage is 4,060 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Small diversion upstream from station for Dayton municipal supply. Figures of daily discharge do not include water diverted 0.6 mi upstream from station by Highline ditch for irrigation downstream from station. National Weather Service data collection platform with satellite telemetry at station. Water-quality data are published in the special studies section of this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	68	56	59	55	50	55	289	181	87	49	41
2	80	54	55	56	56	53	50	189	179	84	49	40
3	74	42	56	59	56	53	50	157	184	83	47	39
4	72	57	56	61	53	54	56	138	181	82	47	38
5	69	66	55	60	56	53	53	172	181	80	47	38
6	59	51	56	59	56	54	55	206	172	78	45	47
7	50	39	58	53	53	51	54	163	155	81	44	68
8	61	30	57	47	45	51	56	183	149	75	44	73
9	64	46	56	54	48	52	51	268	147	75	45	61
10	66	48	47	59	60	53	46	289	142	77	48	63
11	78	38	41	56	61	49	58	272	137	77	44	56
12	74	43	e44	56	59	52	52	320	137	79	46	51
13	68	48	e54	57	58	49	50	415	159	76	44	49
14	68	53	e58	56	55	50	52	478	163	70	44	50
15	64	58	e62	55	57	46	44	517	176	72	48	55
16	63	59	e56	42	55	44	56	476	157	70	53	51
17	66	62	e58	51	57	47	53	372	136	68	55	48
18	65	65	e56	57	55	53	66	282	132	64	50	48
19	63	66	e52	58	53	53	79	252	125	63	48	50
20	61	63	54	57	52	54	81	269	121	60	46	54
21	64	61	55	52	53	53	71	217	116	58	45	53
22	72	61	67	55	51	51	68	204	112	57	45	51
23	68	61	66	53	51	52	61	199	107	57	45	51
24	75	59	63	50	53	49	64	214	104	62	44	51
25	79	56	62	54	50	52	73	210	103	60	43	51
26	79	56	60	56	50	52	102	210	100	58	42	50
27	74	57	62	52	52	52	141	236	98	55	41	53
28	72	56	61	51	47	43	175	218	97	53	41	54
29	71	53	56	54	---	54	232	235	93	51	41	53
30	68	55	61	55	---	52	260	221	89	49	41	53
31	69	---	61	55	---	46	---	192	---	49	41	---
TOTAL	2130	1631	1761	1699	1507	1577	2364	8063	4133	2110	1412	1540
MEAN	68.7	54.4	56.8	54.8	53.8	50.9	78.8	260	138	68.1	45.5	51.3
MAX	80	68	67	61	61	54	260	517	184	87	55	73
MIN	50	30	41	42	45	43	44	138	89	49	41	38
AC-FT	4220	3240	3490	3370	2990	3130	4690	15990	8200	4190	2800	3050
+	264	0	0	0	0	0	165	1100	1110	1270	972	598

## ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

MEAN	73.0	54.4	56.8	54.8	53.8	50.9	81.6	278	156	88.7	61.4	61.3
AC-FT	4480	3240	3490	3370	2990	3130	4860	17090	9310	5460	3770	3650

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2001, BY WATER YEAR (WY)\*

MEAN	82.3	68.1	61.2	56.0	52.6	51.9	109	522	699	242	111	84.6
MAX	284	155	108	88.9	80.8	72.0	354	1048	1482	767	244	163
(WY)	1924	1924	1924	1924	1924	1924	1926	1926	1978	1975	1927	1968
MIN	49.6	41.1	39.6	36.1	34.1	38.1	44.2	260	138	68.1	45.5	42.8
(WY)	1955	1941	1941	1941	1941	1941	1975	2001	2001	2001	2001	1966

YELLOWSTONE RIVER BASIN

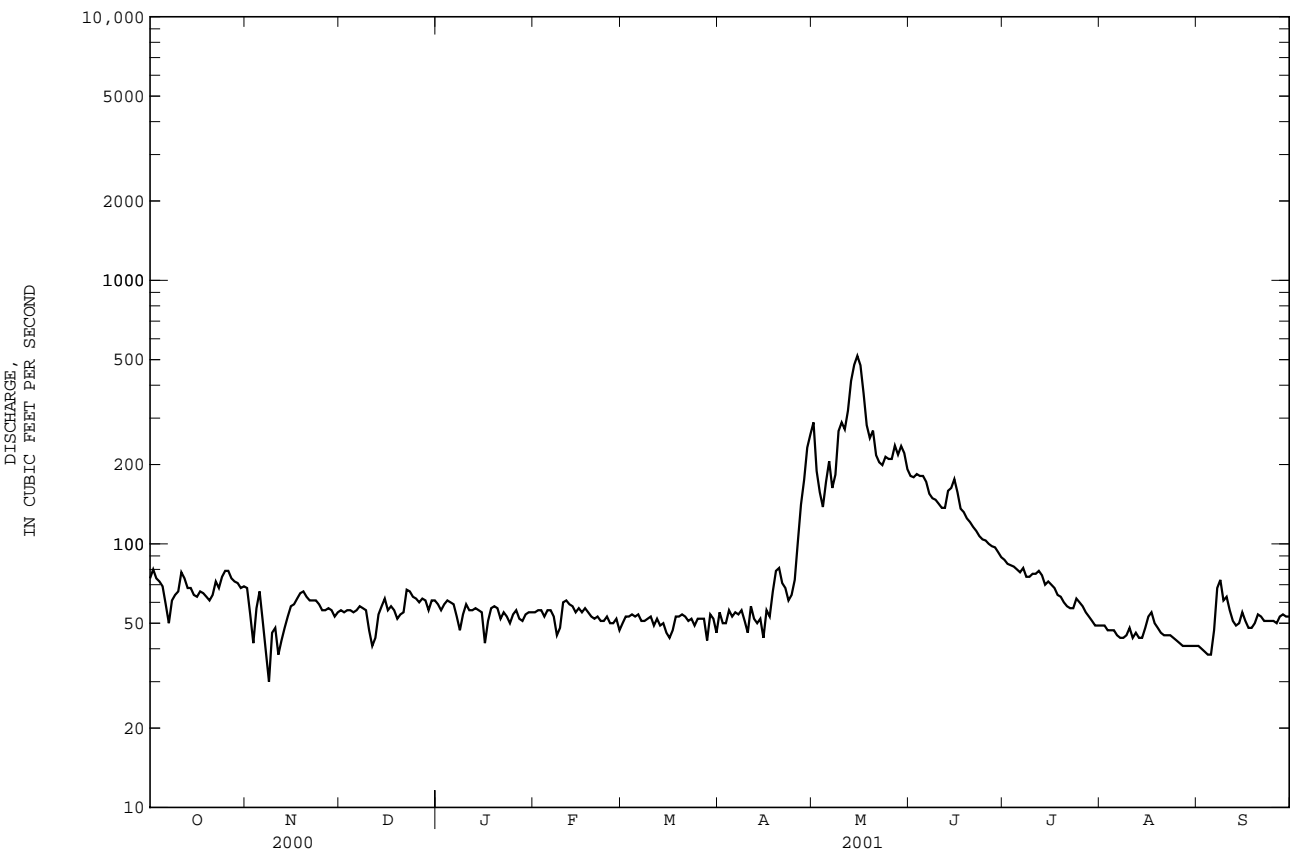
06298000 TONGUE RIVER NEAR DAYTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1919 - 2001	
ANNUAL TOTAL	55997		29927		--	
ANNUAL MEAN	153		82.0		180	
HIGHEST ANNUAL MEAN	--		--		316	
LOWEST ANNUAL MEAN	--		--		82.0	
HIGHEST DAILY MEAN	1010	May 25	517	May 15	2590	Jun 5 1968
LOWEST DAILY MEAN	30	Nov 8	30	Nov 8	18	Nov 29 1919
ANNUAL SEVEN-DAY MINIMUM	42	Nov 7	40	Aug 30	31	Nov 9 1940
MAXIMUM PEAK FLOW	--		666	May 15	3400	Jun 3 1944
MAXIMUM PEAK STAGE	--		3.55	May 15	6.45	Jun 3 1944
ANNUAL RUNOFF (AC-FT)	111100		59360		130100	
10 PERCENT EXCEEDS	413		173		479	
50 PERCENT EXCEEDS	62		56		73	
90 PERCENT EXCEEDS	48		46		48	

+ Diversion, in acre-feet, upstream from station by Highline Ditch.  
\* Unadjusted for diversion by Highline Ditch.  
e Estimated.

ADJUSTED FOR DIVERSION BY HIGHLINE DITCH

	Annual Total	Annual Mean	Annual Runoff (ac-ft)
2000 Calendar Year	56130	154	111400
2001 Water Year	32557	89.2	117700



06299500 WOLF CREEK AT WOLF, WY

LOCATION.--Lat 44°46'21", long 107°14'01", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.4, T.55 N., R.86 W., Sheridan County, Hydrologic Unit 10090101, on left bank at Wolf and 0.5 mi downstream from Red Canyon Creek.

DRAINAGE AREA.--37.8 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1945 to current year (no winter records since 1971). Monthly discharge for January to March 1945, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 4,525 ft above sea level, from topographic map. Prior to May 26, 1945, nonrecording gage at same site and datum.

REMARKS.--Records good. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation is given below:

Oct. 4 . . . 8.00

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by the Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.7	23	22	14	7.0	4.5
2	---	---	---	---	---	---	4.7	18	22	13	6.5	4.5
3	---	---	---	---	---	---	4.7	16	23	13	6.0	4.4
4	---	---	---	---	---	---	4.7	14	23	13	6.0	4.3
5	---	---	---	---	---	---	4.7	17	23	12	6.0	4.4
6	---	---	---	---	---	---	4.9	19	22	12	5.8	4.9
7	---	---	---	---	---	---	5.0	17	20	12	5.8	8.3
8	---	---	---	---	---	---	5.6	18	20	11	5.6	8.3
9	---	---	---	---	---	---	5.0	22	19	11	5.8	7.0
10	---	---	---	---	---	---	4.9	23	19	12	6.0	7.0
11	---	---	---	---	---	---	4.9	21	18	13	6.0	6.0
12	---	---	---	---	---	---	4.7	25	19	13	5.8	5.6
13	---	---	---	---	---	---	4.7	29	23	12	5.8	5.4
14	---	---	---	---	---	---	4.6	34	23	11	5.8	5.6
15	---	---	---	---	---	---	4.6	35	23	11	5.8	6.3
16	---	---	---	---	---	---	4.7	37	21	11	6.0	5.8
17	---	---	---	---	---	---	4.7	35	19	9.6	6.3	5.4
18	---	---	---	---	---	---	5.8	31	19	9.2	5.8	5.4
19	---	---	---	---	---	---	7.5	29	18	9.2	5.4	5.0
20	---	---	---	---	---	---	8.9	29	18	8.9	5.4	4.9
21	---	---	---	---	---	---	7.2	27	17	8.1	5.0	4.7
22	---	---	---	---	---	---	6.3	26	16	8.1	5.0	4.7
23	---	---	---	---	---	---	6.0	26	16	8.1	5.0	4.7
24	---	---	---	---	---	---	6.3	25	16	11	5.0	4.6
25	---	---	---	---	---	---	8.1	25	16	9.2	4.9	4.6
26	---	---	---	---	---	---	12	25	15	8.3	4.7	4.5
27	---	---	---	---	---	---	16	29	15	8.1	4.6	4.5
28	---	---	---	---	---	---	18	26	15	7.8	4.7	4.5
29	---	---	---	---	---	---	20	27	14	7.2	4.7	4.5
30	---	---	---	---	---	---	20	27	14	7.0	4.7	4.5
31	---	---	---	---	---	---	---	24	---	7.0	4.7	---
TOTAL	---	---	---	---	---	---	223.9	779	568	320.8	171.6	158.8
MEAN	---	---	---	---	---	---	7.46	25.1	18.9	10.3	5.54	5.29
MAX	---	---	---	---	---	---	20	37	23	14	7.0	8.3
MIN	---	---	---	---	---	---	4.6	14	14	7.0	4.6	4.3
AC-FT	---	---	---	---	---	---	444	1550	1130	636	340	315

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)\*

	MEAN	8.77	6.98	5.69	4.73	4.48	4.96	14.2	95.4	131	37.0	14.9	10.0
MAX	14.2	9.97	7.46	6.07	5.64	9.27	37.4	179	287	95.2	30.8	23.0	
(WY)	1969	1952	1969	1962	1962	1972	1994	1978	1975	1975	1951	1968	
MIN	6.46	5.73	3.83	2.80	3.15	3.65	6.39	25.1	18.9	10.3	5.54	5.29	
(WY)	1957	1961	1950	1950	1957	1957	1958	2001	2001	2001	2001	2001	

## YELLOWSTONE RIVER BASIN

06299500 WOLF CREEK AT WOLF, WY--Continued

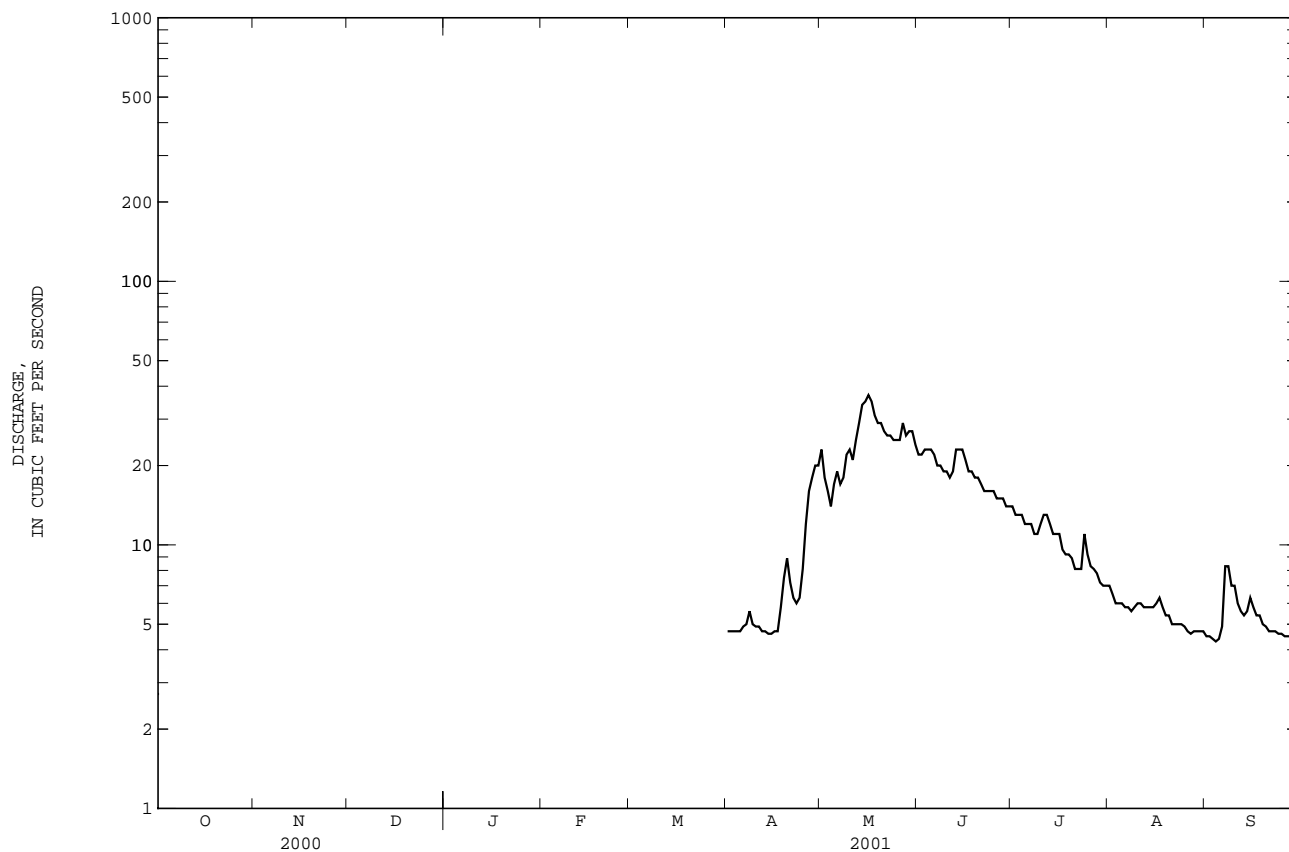
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1946 - 2001\*

ANNUAL MEAN	--	29.3	
HIGHEST ANNUAL MEAN	--	45.0	1964
LOWEST ANNUAL MEAN	--	13.8	1960
HIGHEST DAILY MEAN	37	May 16	601
LOWEST DAILY MEAN	4.3	Sep 4	1.8
MAXIMUM PEAK FLOW	41	May 15	1130 <sup>a</sup>
MAXIMUM PEAK STAGE	1.57	May 15	4.60
ANNUAL RUNOFF (AC-FT)	--		21220

\* For period of operation.

a From rating curve extended above 500 ft<sup>3</sup>/s.

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°32'18", long 107°13'33", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.28, T.53 N., R.86 W., Johnson County, Hydrologic Unit 10090101, Bighorn National Forest, on right bank 0.7 mi upstream from Park Reservoir and 16 mi southwest of Big Horn.

DRAINAGE AREA.--20.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1973). Prior to October 1960, published as East Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Elevation of gage is 8,320 ft above sea level, from topographic map. Prior to June 28, 1960, water-stage recorder at site 1.1 mi downstream at different datum. June 28, 1960, to July 14, 1970, water-stage recorder at site 0.9 mi downstream at different datums and July 15 to Oct. 7, 1970, nonrecording gage at present site and datum.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 9 . . . 9.17

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	80	27	6.8	2.9
2	---	---	---	---	---	---	---	---	92	25	6.2	2.6
3	---	---	---	---	---	---	---	---	85	22	6.0	2.4
4	---	---	---	---	---	---	---	---	61	21	5.8	2.3
5	---	---	---	---	---	---	---	---	44	20	5.8	2.2
6	---	---	---	---	---	---	---	---	37	18	5.6	3.8
7	---	---	---	---	---	---	---	---	38	17	5.4	6.2
8	---	---	---	---	---	---	---	---	58	16	5.6	7.6
9	---	---	---	---	---	---	---	---	77	16	5.8	7.4
10	---	---	---	---	---	---	---	---	82	20	5.8	7.6
11	---	---	---	---	---	---	---	---	74	18	5.6	7.0
12	---	---	---	---	---	---	---	---	64	17	5.4	6.3
13	---	---	---	---	---	---	---	---	62	17	5.0	5.8
14	---	---	---	---	---	---	---	---	47	15	4.9	8.0
15	---	---	---	---	---	---	---	165	39	15	4.9	12
16	---	---	---	---	---	---	---	212	34	16	4.7	11
17	---	---	---	---	---	---	---	124	36	14	5.2	9.7
18	---	---	---	---	---	---	---	88	40	12	4.9	9.0
19	---	---	---	---	---	---	---	82	35	11	4.4	8.3
20	---	---	---	---	---	---	---	88	30	11	3.9	8.2
21	---	---	---	---	---	---	---	48	32	10	3.5	7.4
22	---	---	---	---	---	---	---	36	36	9.9	3.5	6.8
23	---	---	---	---	---	---	---	36	41	9.7	3.5	6.6
24	---	---	---	---	---	---	---	68	41	12	3.4	6.2
25	---	---	---	---	---	---	---	92	46	11	3.1	5.8
26	---	---	---	---	---	---	---	124	42	10	3.1	5.6
27	---	---	---	---	---	---	---	144	42	9.7	3.0	5.1
28	---	---	---	---	---	---	---	113	37	9.0	2.8	4.9
29	---	---	---	---	---	---	---	121	32	8.3	2.7	4.6
30	---	---	---	---	---	---	---	102	28	7.6	2.7	4.4
31	---	---	---	---	---	---	---	78	---	7.2	2.9	---
TOTAL	---	---	---	---	---	---	---	---	1492	452.4	141.9	187.7
MEAN	---	---	---	---	---	---	---	---	49.7	14.6	4.58	6.26
MAX	---	---	---	---	---	---	---	---	92	27	6.8	12
MIN	---	---	---	---	---	---	---	---	28	7.2	2.7	2.2
AC-FT	---	---	---	---	---	---	---	---	2960	897	281	372

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)\*

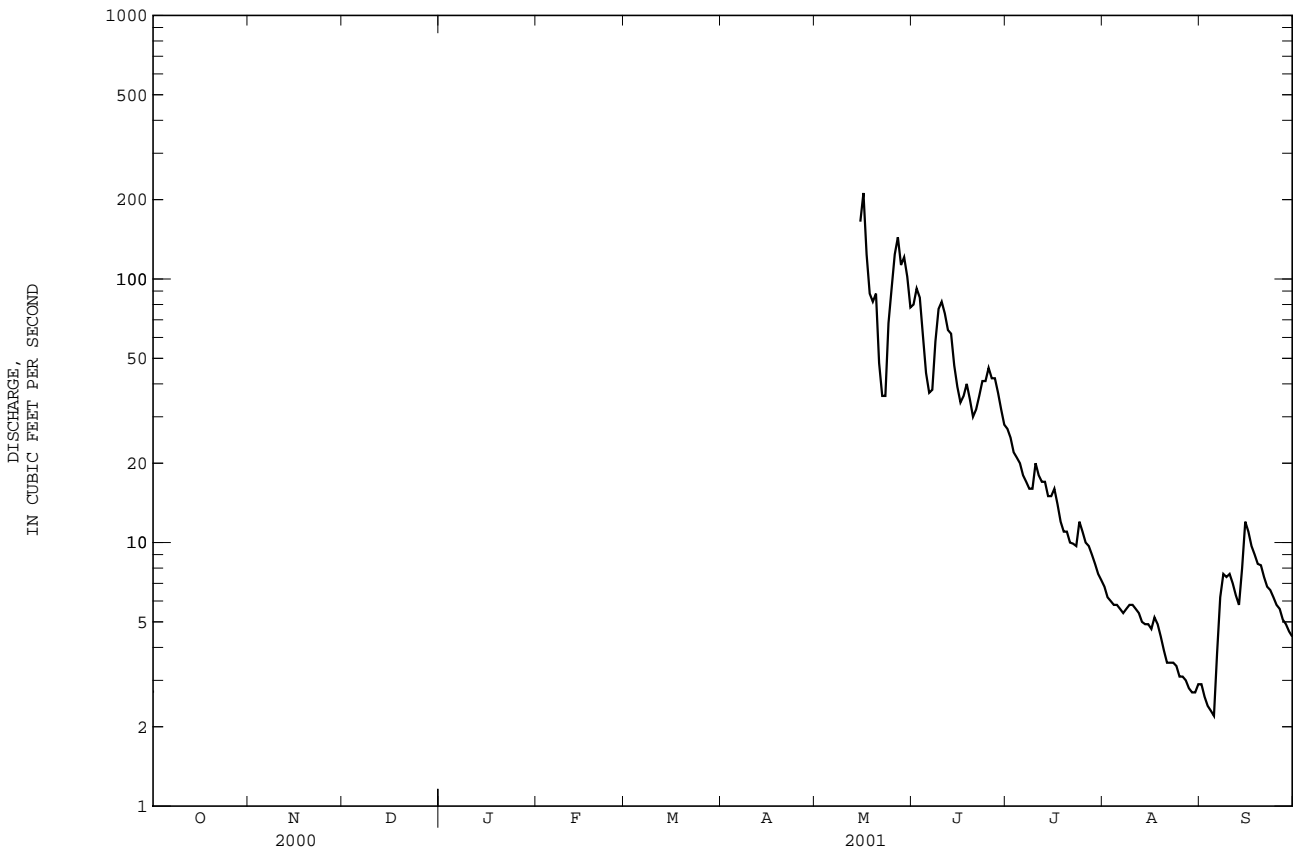
	MEAN	8.61	5.47	3.65	3.04	2.60	2.52	4.78	84.1	173	57.8	17.2	11.5
MAX	16.9	8.43	5.32	4.16	3.30	3.52	18.6	152	372	177	46.5	37.0	
(WY)	1968	1969	1958	1962	1959	1962	1962	1958	1995	1975	1968	1968	
MIN	4.48	2.85	2.23	1.87	1.63	1.15	1.76	28.0	49.7	12.7	3.67	5.22	
(WY)	1971	1963	1963	1971	1971	1971	1971	1983	2001	1988	1988	1954	

YELLOWSTONE RIVER BASIN

06300500 EAST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1954 - 2001*	
ANNUAL MEAN	--		32.6	
HIGHEST ANNUAL MEAN	--		41.8	1963
LOWEST ANNUAL MEAN	--		21.4	1966
HIGHEST DAILY MEAN	212	May 16	775	Jun 15 1963
LOWEST DAILY MEAN	2.2	Sep 5	1.0 <sup>a</sup>	Dec 11 1963
MAXIMUM PEAK FLOW	251	May 16	1230 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	4.60	May 16	4.59 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		23600	

\* For period of operation.  
a From rating curve extended above 250 ft<sup>3</sup>/s on basis of slope-area measurement.  
b Site and datum then in use.





06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'05", long 107°19'01", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 0.2 mi upstream from Twin Lakes, and 17.0 mi southwest of Big Horn.

DRAINAGE AREA.--3.41 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year (no winter records 1993 to 1996, 1998-2001).

GAGE.--Water-stage recorder. Elevation of gage is 8,690 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 10 . . . 0.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e9.0	11	2.7	.10	.02
2	---	---	---	---	---	---	---	e8.0	11	2.4	.09	.01
3	---	---	---	---	---	---	---	e7.0	12	2.2	.08	.01
4	---	---	---	---	---	---	---	e6.0	11	2.1	.07	.00
5	---	---	---	---	---	---	---	e5.5	9.2	1.8	.07	.00
6	---	---	---	---	---	---	---	e5.2	7.4	1.7	.06	.06
7	---	---	---	---	---	---	---	e5.0	6.4	1.5	.06	.08
8	---	---	---	---	---	---	---	e5.5	6.3	1.4	.07	.10
9	---	---	---	---	---	---	---	e7.0	7.4	1.4	.07	.10
10	---	---	---	---	---	---	---	e10	8.7	1.4	.07	.10
11	---	---	---	---	---	---	---	e14	8.5	1.3	.07	.09
12	---	---	---	---	---	---	---	18	7.8	1.2	.07	.09
13	---	---	---	---	---	---	---	30	8.4	1.1	.07	.09
14	---	---	---	---	---	---	---	38	7.8	1.1	.06	.14
15	---	---	---	---	---	---	---	40	7.3	1.0	.07	.18
16	---	---	---	---	---	---	---	45	6.4	.94	.14	.18
17	---	---	---	---	---	---	---	31	5.6	.84	.17	.19
18	---	---	---	---	---	---	---	20	5.2	.75	.14	.19
19	---	---	---	---	---	---	---	17	5.0	.65	.12	.19
20	---	---	---	---	---	---	---	18	4.7	.57	.10	.18
21	---	---	---	---	---	---	---	12	4.2	.46	.08	.15
22	---	---	---	---	---	---	---	9.6	3.9	.38	.08	.13
23	---	---	---	---	---	---	---	8.7	3.7	.34	.06	.12
24	---	---	---	---	---	---	---	12	3.8	.43	.06	.11
25	---	---	---	---	---	---	---	15	3.8	.36	.05	.11
26	---	---	---	---	---	---	---	18	3.7	.33	.04	.11
27	---	---	---	---	---	---	---	21	3.7	.27	.04	.10
28	---	---	---	---	---	---	---	18	3.6	.23	.03	.10
29	---	---	---	---	---	---	---	17	3.3	.17	.03	.09
30	---	---	---	---	---	---	---	15	3.0	.13	.03	.09
31	---	---	---	---	---	---	---	12	---	.12	.02	---
TOTAL	---	---	---	---	---	---	---	497.5	193.8	31.27	2.27	3.11
MEAN	---	---	---	---	---	---	---	16.0	6.46	1.01	.073	.10
MAX	---	---	---	---	---	---	---	45	12	2.7	.17	.19
MIN	---	---	---	---	---	---	---	5.0	3.0	.12	.02	.00
AC-FT	---	---	---	---	---	---	---	987	384	62	4.5	6.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)\*

	MEAN	.57	.50	.27	.16	.13	.14	.58	18.7	26.4	6.47	1.41	.63
MAX	.71	.61	.36	.22	.20	.21	1.59	27.4	50.9	14.1	3.50	1.26	
(WY)	1993	1993	1993	1992	1992	1992	1992	1992	1995	1995	1993	1998	
MIN	.52	.43	.17	.12	.089	.055	.15	8.58	6.46	1.01	.073	.10	
(WY)	1992	1997	1991	1997	1997	1997	1997	1995	2001	2001	2001	2001	

## YELLOWSTONE RIVER BASIN

06301480 CONEY CREEK ABOVE TWIN LAKES, NEAR BIG HORN, WY--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1991 - 2001\*

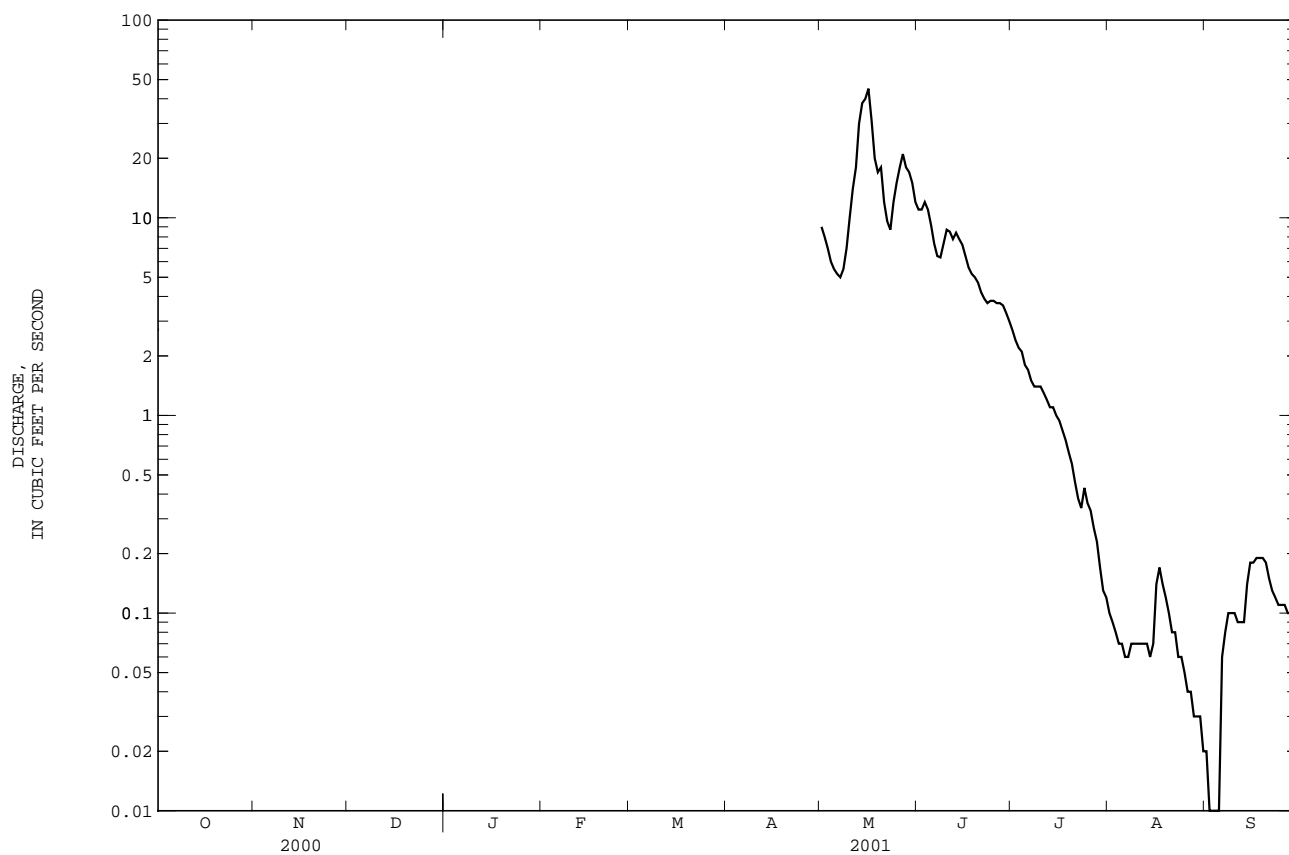
ANNUAL MEAN	--	5.43	
HIGHEST ANNUAL MEAN	--	5.84	1992
LOWEST ANNUAL MEAN	--	4.83	1991
HIGHEST DAILY MEAN	45	May 16	105 Jun 16 1995
LOWEST DAILY MEAN	.00	Sep 4,5	135 <sup>a</sup> Sep 4,5 2001
MAXIMUM PEAK FLOW	50	May 15	135 <sup>a</sup> Jun 15 1995
MAXIMUM PEAK STAGE	3.37	May 15	5.05 <sup>b</sup> May 14 1991
ANNUAL RUNOFF (AC-FT)	--		3940

\* For period of operation.

a Gage height, 4.35 ft.

b Backwater from snow and ice.

e Estimated.



06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY

LOCATION.--Lat 44°36'33", long 107°18'32", unsurveyed, Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, 30 ft downstream from Twin Lakes Reservoir, 0.4 mi upstream from mouth, and 16.2 mi southwest of Big Horn.

DRAINAGE AREA.--8.07 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to September 1994, October 1995 to current year (no winter records 1993, 1994, 1996, 1998-2001).

GAGE.--Water-stage recorder and concrete weir. Elevation of gage is 8,560 ft above sea level, from topographic map. October 1990 to September 1998, at site 0.2 mi downstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by Twin Lakes Reservoir, capacity, 3,400 acre-ft. Seasonal records collected by State of Wyoming at site 0.2 mi downstream, at different datum, 1971-90.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e.50	9.1	13	8.8	8.0
2	---	---	---	---	---	---	---	e.50	9.1	13	8.8	8.0
3	---	---	---	---	---	---	---	e.50	9.2	12	6.2	8.0
4	---	---	---	---	---	---	---	e.50	9.1	12	4.6	8.0
5	---	---	---	---	---	---	---	e.50	9.2	12	4.6	8.0
6	---	---	---	---	---	---	---	e.50	9.2	12	4.6	8.0
7	---	---	---	---	---	---	---	e.50	9.3	12	4.6	8.2
8	---	---	---	---	---	---	---	e.50	9.2	12	4.6	8.2
9	---	---	---	---	---	---	---	e.50	9.3	11	4.5	8.2
10	---	---	---	---	---	---	---	e.50	9.2	10	4.5	8.1
11	---	---	---	---	---	---	---	e6.0	3.9	10	4.5	8.1
12	---	---	---	---	---	---	---	e15	.03	10	4.5	7.3
13	---	---	---	---	---	---	---	e25	.03	10	4.5	6.5
14	---	---	---	---	---	---	---	e35	.03	10	4.5	6.5
15	---	---	---	---	---	---	---	e45	.03	10	4.5	6.6
16	---	---	---	---	---	---	---	e25	.03	10	4.5	6.4
17	---	---	---	---	---	---	---	e.50	.03	11	4.5	5.0
18	---	---	---	---	---	---	---	e.50	.03	9.6	4.5	4.3
19	---	---	---	---	---	---	---	e.50	.03	10	4.5	3.0
20	---	---	---	---	---	---	---	e.50	.03	10	4.5	2.3
21	---	---	---	---	---	---	---	e.50	.03	10	4.5	2.3
22	---	---	---	---	---	---	---	e.50	4.9	10	4.5	2.3
23	---	---	---	---	---	---	---	e.50	12	10	4.5	2.4
24	---	---	---	---	---	---	---	e.50	12	10	4.5	2.4
25	---	---	---	---	---	---	---	e.50	12	10	4.5	2.4
26	---	---	---	---	---	---	---	e6.0	12	11	4.5	2.4
27	---	---	---	---	---	---	---	e9.0	12	10	6.3	2.4
28	---	---	---	---	---	---	---	e9.0	12	10	7.5	3.1
29	---	---	---	---	---	---	---	e9.0	12	10	7.5	3.9
30	---	---	---	---	---	---	---	e9.0	12	9.6	7.8	3.9
31	---	---	---	---	---	---	---	e9.0	---	8.8	7.9	---
TOTAL	---	---	---	---	---	---	---	211.50	197.00	329.0	164.8	164.2
MEAN	---	---	---	---	---	---	---	6.82	6.57	10.6	5.32	5.47
MAX	---	---	---	---	---	---	---	45	12	13	8.8	8.2
MIN	---	---	---	---	---	---	---	.50	.03	8.8	4.5	2.3
AC-FT	---	---	---	---	---	---	---	420	391	653	327	326

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2001, BY WATER YEAR (WY)\*

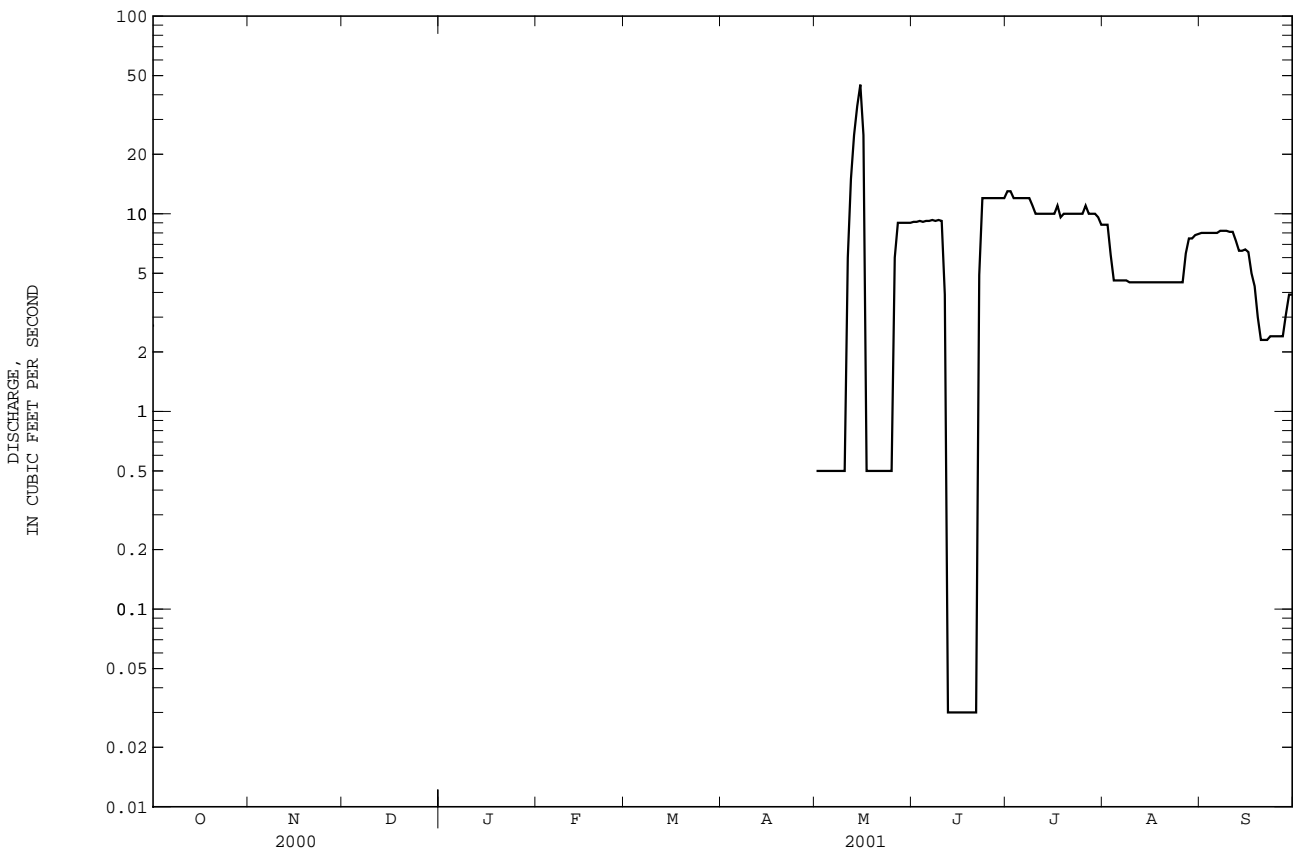
MEAN	1.68	.38	.20	.14	.17	.23	.52	28.1	44.0	13.7	8.60	6.16
MAX	4.50	.56	.32	.26	.32	.51	1.32	54.4	81.3	27.1	18.7	12.7
(WY)	1991	1997	1992	1992	1992	1992	1992	1993	1997	1992	1998	1999
MIN	.50	.14	.13	.045	.040	.041	.20	1.45	5.58	5.08	2.03	.78
(WY)	1992	1993	1997	1997	1997	1997	1993	1999	2000	1994	1996	1996

YELLOWSTONE RIVER BASIN

06301495 CONEY CREEK BELOW TWIN LAKES, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1991 - 2001*	
ANNUAL MEAN	--		12.0	
HIGHEST ANNUAL MEAN	--		12.6	1992
LOWEST ANNUAL MEAN	--		11.2	1991
HIGHEST DAILY MEAN	45	May 15	172	May 29 1993
LOWEST DAILY MEAN	.03	Many days	223 <sup>a</sup>	Many days
MAXIMUM PEAK FLOW	101	Jul 17	4.32 <sup>b</sup>	May 29 1993
MAXIMUM PEAK STAGE	2.51	Jul 17		May 1 1997
ANNUAL RUNOFF (AC-FT)	--		8710	

\* For period of operation.  
a Gage height, 3.16 ft, site and datum then in use.  
b Backwater from snow and ice, site and datum then in use.  
e Estimated.



06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY

LOCATION.--Lat 44°36'47", long 107°17'49", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.35, T.54 N., R.87 W., Sheridan County, Hydrologic Unit 10090101, Bighorn National Forest, on left bank 0.3 mi downstream from Twin Lakes Branch and 16 mi west of Big Horn.

DRAINAGE AREA.--24.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1953 to current year (no winter records since 1971). Prior to October 1960, published as West Goose Creek near Big Horn.

GAGE.--Water-stage recorder. Elevation of gage is 8,420 ft above sea level, from topographic map.

REMARKS.--Records fair. Some regulation by Twin Lakes, capacity, 1,520 acre-ft, and Dome Lake, capacity, 1,800 acre-ft. No diversion upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 10 . . . 6.95

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	64	42	16	15
2	---	---	---	---	---	---	---	---	69	41	16	16
3	---	---	---	---	---	---	---	---	86	39	13	16
4	---	---	---	---	---	---	---	---	80	38	11	16
5	---	---	---	---	---	---	---	---	65	37	11	16
6	---	---	---	---	---	---	---	---	54	37	11	16
7	---	---	---	---	---	---	---	---	47	37	11	15
8	---	---	---	---	---	---	---	---	50	33	11	15
9	---	---	---	---	---	---	---	---	51	28	11	15
10	---	---	---	---	---	---	---	---	60	26	11	15
11	---	---	---	---	---	---	---	---	70	26	11	17
12	---	---	---	---	---	---	---	---	68	26	11	19
13	---	---	---	---	---	---	---	---	66	26	11	17
14	---	---	---	---	---	---	---	---	61	26	11	17
15	---	---	---	---	---	---	---	110	55	26	11	16
16	---	---	---	---	---	---	---	185	48	26	11	13
17	---	---	---	---	---	---	---	152	44	26	12	12
18	---	---	---	---	---	---	---	103	43	23	13	12
19	---	---	---	---	---	---	---	82	41	24	13	11
20	---	---	---	---	---	---	---	85	40	24	13	11
21	---	---	---	---	---	---	---	64	39	24	13	11
22	---	---	---	---	---	---	---	47	41	22	13	11
23	---	---	---	---	---	---	---	39	43	21	13	11
24	---	---	---	---	---	---	---	49	42	21	13	11
25	---	---	---	---	---	---	---	65	42	21	13	10
26	---	---	---	---	---	---	---	90	42	21	13	9.7
27	---	---	---	---	---	---	---	126	42	21	14	9.7
28	---	---	---	---	---	---	---	111	42	21	15	9.7
29	---	---	---	---	---	---	---	100	42	19	15	9.4
30	---	---	---	---	---	---	---	94	42	17	15	9.4
31	---	---	---	---	---	---	---	81	---	16	15	---
TOTAL	---	---	---	---	---	---	---	---	1579	835	391	401.9
MEAN	---	---	---	---	---	---	---	---	52.6	26.9	12.6	13.4
MAX	---	---	---	---	---	---	---	---	86	42	16	19
MIN	---	---	---	---	---	---	---	---	39	16	11	9.4
AC-FT	---	---	---	---	---	---	---	---	3130	1660	776	797

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)\*

	MEAN	8.54	6.16	4.82	3.79	3.09	2.98	4.90	68.0	190	64.0	31.0	22.8
MAX	18.0	10.3	9.61	6.55	5.96	5.40	15.5	141	311	161	57.3	48.9	
(WY)	1963	1969	1969	1965	1963	1963	1962	1994	1995	1975	1968	1968	
MIN	2.67	1.22	1.03	1.05	1.06	1.46	1.71	5.23	52.6	26.9	12.6	4.48	
(WY)	1964	1964	1964	1964	1964	1964	1957	1995	2001	2001	2001	1988	

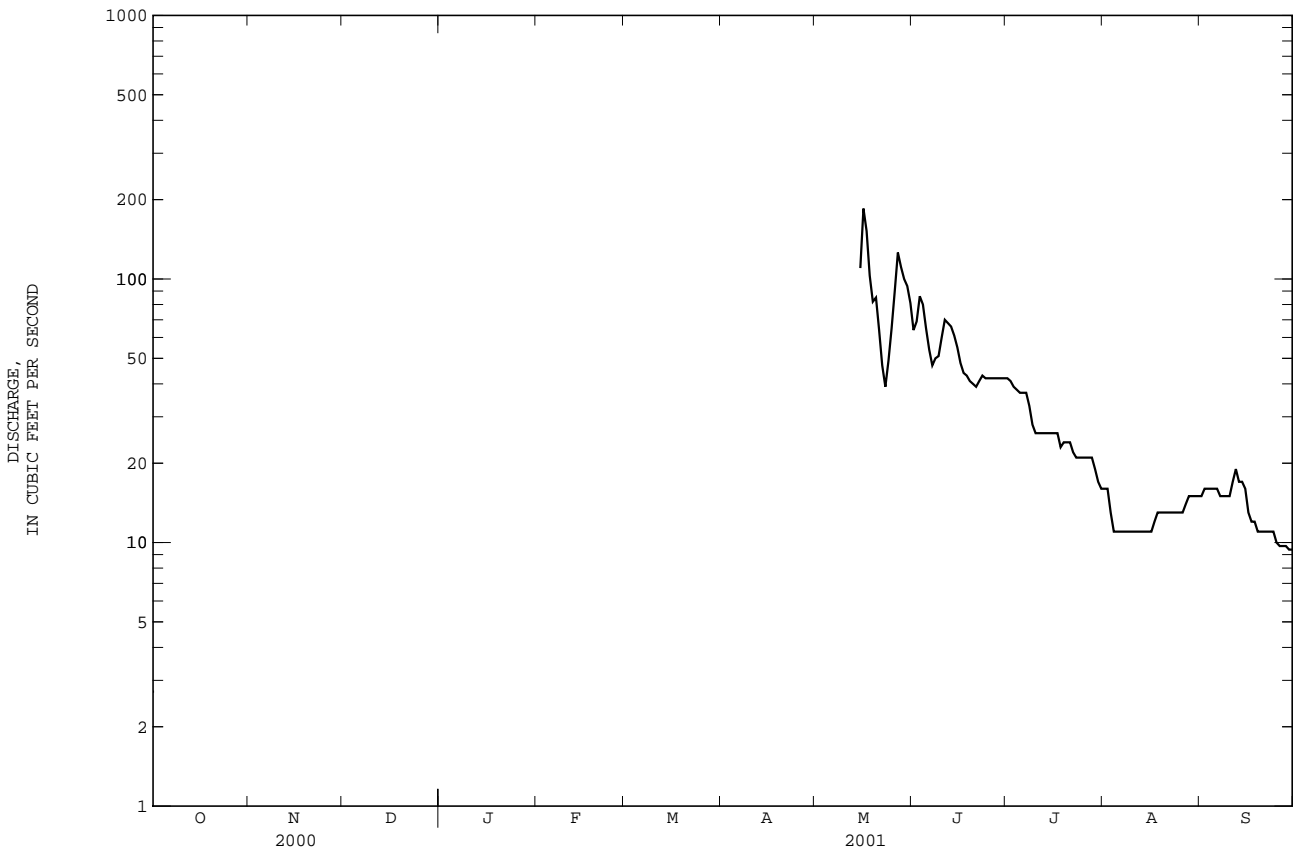
YELLOWSTONE RIVER BASIN

06301500 WEST FORK BIG GOOSE CREEK NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR *		WATER YEARS 1954 - 2001*	
ANNUAL MEAN	--		34.3	
HIGHEST ANNUAL MEAN	--		45.7	1965
LOWEST ANNUAL MEAN	--		21.7	1960
HIGHEST DAILY MEAN	185	May 16	674	Jun 16 1995
LOWEST DAILY MEAN	9.4	Sep 29,30	.80	Several days 1963,1964
MAXIMUM PEAK FLOW	222	May 16	1030 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	3.08	May 16	5.37	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		24880	

\* For period of operation.

a From rating curve extended above 410 ft<sup>3</sup>/s on basis of velocity-area study.



06301850 BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY

LOCATION.--Lat 44°41'45", long 107°11'27", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.35, T.55 N., R.86 W, Sheridan County, Hydrologic Unit 10090101, on left bank 515 ft above the headgate of PK ditch, 0.4 mi above Red Canyon, and 13.5 mi southwest of Sheridan.

DRAINAGE AREA.--124 mi<sup>2</sup>.

PERIOD OF RECORD.--April to September 2001.

GAGE.--Water-stage recorder. Elevation of gage is 4,678 ft above sea level, from topographic map.

REMARKS.--Records fair except for those estimated daily discharges, which are poor. Natural flow affected by transbasin diversions and storage reservoirs. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 4. . . 25.5

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	18	68	98	59	46	e54
2	---	---	---	---	---	---	18	45	94	59	51	e54
3	---	---	---	---	---	---	18	39	115	56	60	e56
4	---	---	---	---	---	---	19	36	113	55	60	e56
5	---	---	---	---	---	---	20	42	101	54	59	e54
6	---	---	---	---	---	---	20	45	83	54	60	56
7	---	---	---	---	---	---	20	40	71	54	61	60
8	---	---	---	---	---	---	19	42	72	52	62	59
9	---	---	---	---	---	---	18	51	72	47	62	56
10	---	---	---	---	---	---	17	49	75	64	63	55
11	---	---	---	---	---	---	18	46	92	65	63	50
12	---	---	---	---	---	---	18	57	90	65	63	55
13	---	---	---	---	---	---	18	52	98	64	61	58
14	---	---	---	---	---	---	18	55	90	63	59	61
15	---	---	---	---	---	---	19	86	83	64	59	69
16	---	---	---	---	---	---	19	205	74	65	61	63
17	---	---	---	---	---	---	18	183	68	68	60	60
18	---	---	---	---	---	---	23	131	66	67	61	54
19	---	---	---	---	---	---	28	111	63	68	61	51
20	---	---	---	---	---	---	28	114	63	68	61	48
21	---	---	---	---	---	---	23	97	60	67	60	48
22	---	---	---	---	---	---	24	79	59	65	59	47
23	---	---	---	---	---	---	24	68	63	61	56	46
24	---	---	---	---	---	---	24	73	61	59	55	41
25	---	---	---	---	---	---	28	91	61	55	54	24
26	---	---	---	---	---	---	38	115	60	55	54	23
27	---	---	---	---	---	---	54	153	61	55	e54	24
28	---	---	---	---	---	---	65	142	61	55	e54	23
29	---	---	---	---	---	---	68	131	60	54	e54	23
30	---	---	---	---	---	---	59	126	59	48	e54	24
31	---	---	---	---	---	---	---	111	---	47	e54	---
TOTAL	---	---	---	---	---	---	801	2683	2286	1832	1801	1452
MEAN	---	---	---	---	---	---	26.7	86.5	76.2	59.1	58.1	48.4
MAX	---	---	---	---	---	---	68	205	115	68	63	69
MIN	---	---	---	---	---	---	17	36	59	47	46	23
AC-FT	---	---	---	---	---	---	1590	5320	4530	3630	3570	2880

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	AC-FT
MEAN	---	---	---	---
MAX	---	---	---	---
(WY)	---	---	---	---
MIN	---	---	---	---
(WY)	---	---	---	---

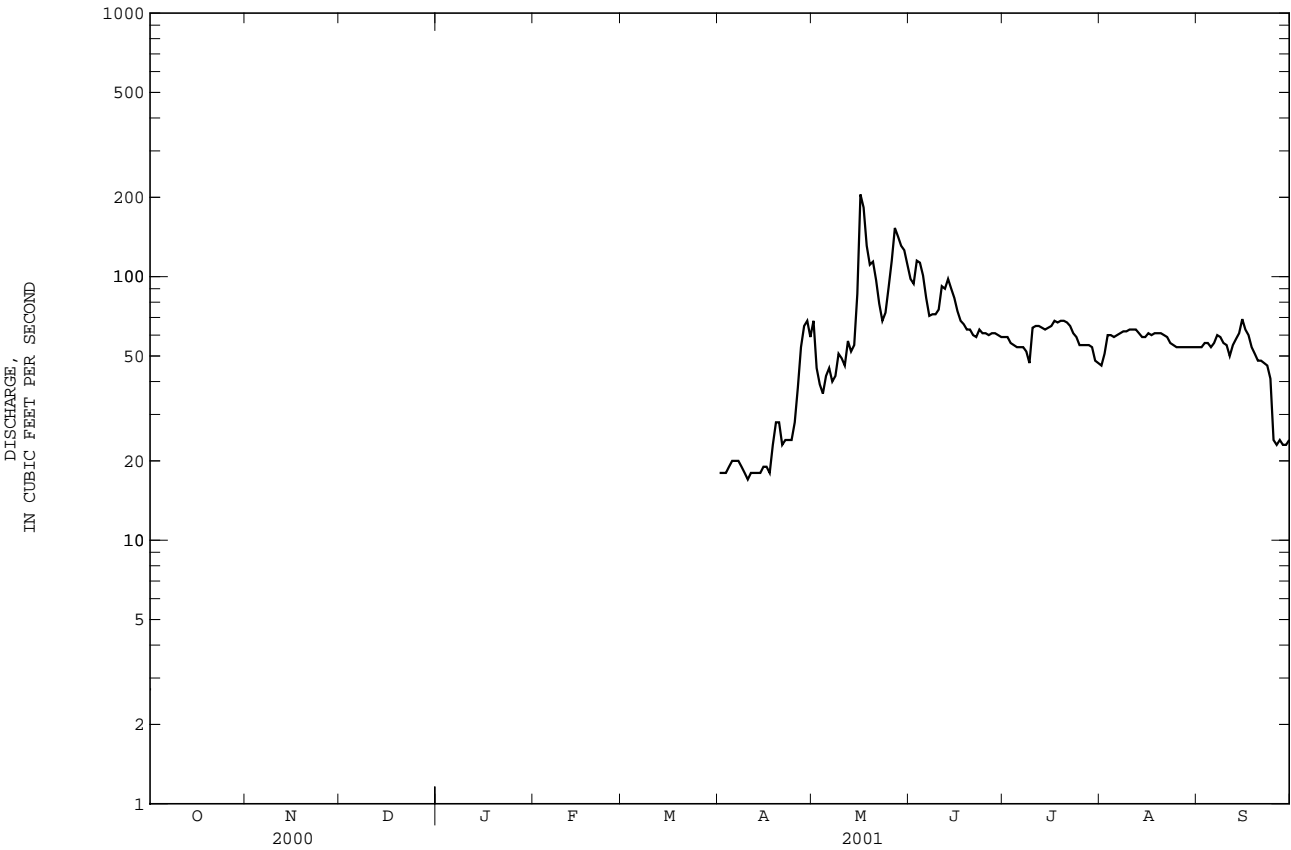
06301850 BIG GOOSE CREEK ABOVE PK DITCH, IN CANYON, NEAR SHERIDAN, WY--Continued

SUMMARY STATISTICS

FOR 2001 WATER YEAR

HIGHEST DAILY MEAN	205	May 16
LOWEST DAILY MEAN	17	Apr 10
ANNUAL SEVEN-DAY MINIMUM	18	Apr 8
MAXIMUM PEAK FLOW	241	May 16
MAXIMUM PEAK STAGE	2.34	May 16

e Estimated.





06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY

LOCATION.--Lat 44°35'46", long 107°02'22", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.1, T.53 N., R.85 W., Sheridan County, Hydrologic Unit 10090101, on left bank 100 ft upstream from headgate of Lower Peralta ditch and 6.5 mi southwest of Big Horn.

DRAINAGE AREA.--51.6 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1941 to current year (no winter records since 1971).

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above sea level, from topographic map.

REMARKS.--Records good. Three small reservoirs upstream from station, combined capacity, 860 acre-ft, two of which store some imported water. Water imported into drainage basin upstream from station from East Goose Creek basin is diverted downstream from station for irrigation. Result of discharge measurement, in cubic feet per second, made when station was not in operation, is given below:

Oct. 2 . . . 15.9

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	6.9	52	86	47	64	44
2	---	---	---	---	---	---	6.6	43	88	48	64	43
3	---	---	---	---	---	---	6.6	39	93	52	62	42
4	---	---	---	---	---	---	6.9	37	87	52	61	39
5	---	---	---	---	---	---	6.9	40	73	51	60	38
6	---	---	---	---	---	---	7.8	45	63	52	60	43
7	---	---	---	---	---	---	8.4	40	54	54	60	47
8	---	---	---	---	---	---	8.4	41	51	53	60	38
9	---	---	---	---	---	---	8.1	48	50	59	56	34
10	---	---	---	---	---	---	7.5	50	45	67	55	33
11	---	---	---	---	---	---	8.1	49	42	72	52	30
12	---	---	---	---	---	---	7.5	56	41	79	52	29
13	---	---	---	---	---	---	7.5	81	54	78	52	27
14	---	---	---	---	---	---	7.2	112	54	77	50	27
15	---	---	---	---	---	---	7.4	112	51	79	52	26
16	---	---	---	---	---	---	7.8	100	48	80	51	23
17	---	---	---	---	---	---	8.0	85	45	85	49	22
18	---	---	---	---	---	---	12	67	43	86	48	27
19	---	---	---	---	---	---	16	63	41	88	48	26
20	---	---	---	---	---	---	17	66	39	87	49	26
21	---	---	---	---	---	---	14	51	38	86	54	25
22	---	---	---	---	---	---	13	49	36	86	52	25
23	---	---	---	---	---	---	12	50	36	83	50	23
24	---	---	---	---	---	---	13	54	36	84	48	21
25	---	---	---	---	---	---	18	64	35	75	47	13
26	---	---	---	---	---	---	26	81	34	72	47	12
27	---	---	---	---	---	---	39	89	34	71	45	11
28	---	---	---	---	---	---	47	74	33	69	45	11
29	---	---	---	---	---	---	50	92	36	68	45	11
30	---	---	---	---	---	---	49	93	48	67	45	11
31	---	---	---	---	---	---	---	90	---	64	45	---
TOTAL	---	---	---	---	---	---	453.6	2013	1514	2171	1628	827
MEAN	---	---	---	---	---	---	15.1	64.9	50.5	70.0	52.5	27.6
MAX	---	---	---	---	---	---	50	112	93	88	64	47
MIN	---	---	---	---	---	---	6.6	37	33	47	45	11
AC-FT	---	---	---	---	---	---	900	3990	3000	4310	3230	1640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)\*

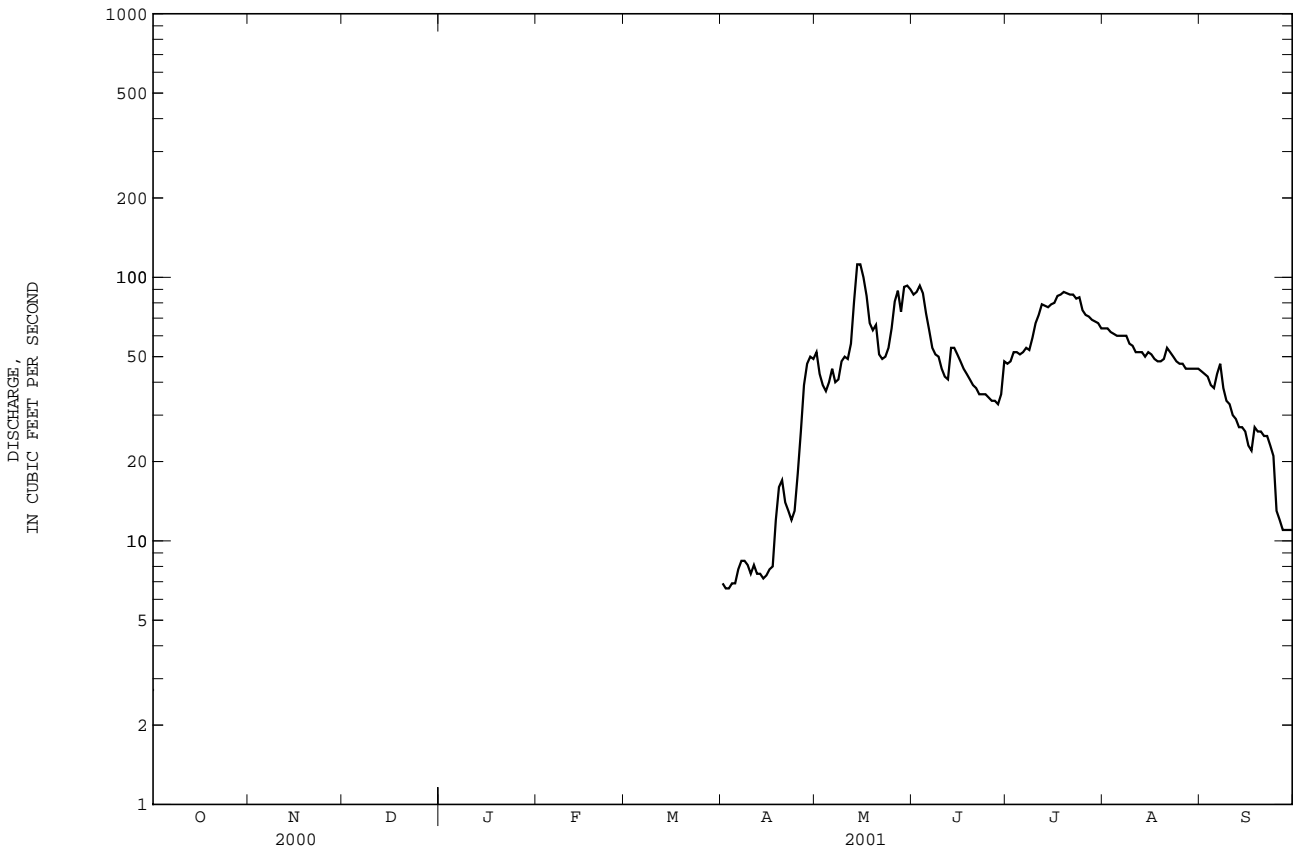
	MEAN	23.6	13.1	10.4	8.58	8.11	8.48	34.8	177	237	104	80.9	51.8
MAX	46.0	26.5	17.5	12.3	13.9	14.1	106	339	502	209	124	90.0	
(WY)	1959	1962	1942	1942	1962	1962	1943	1944	1995	1975	1968	1978	
MIN	12.7	8.51	6.49	4.99	5.38	5.76	9.46	64.9	50.5	66.6	41.1	20.4	
(WY)	1954	1955	1950	1950	1950	1950	1970	2001	2001	1981	1981	1960	

YELLOWSTONE RIVER BASIN

06303500 LITTLE GOOSE CREEK IN CANYON, NEAR BIG HORN, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1941 - 2001*	
ANNUAL MEAN	--		63.4	
HIGHEST ANNUAL MEAN	--		83.9	1970
LOWEST ANNUAL MEAN	--		40.6	1960
HIGHEST DAILY MEAN	112	May 14,15	837	Jun 15 1963
LOWEST DAILY MEAN	6.6	Apr 2,3	3.0 <sup>a</sup>	Jan 3 1950
MAXIMUM PEAK FLOW	177	May 14	1350	Jun 15 1963
MAXIMUM PEAK STAGE	2.87	May 14	6.78	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		45900	

\* For period of operation.  
a From rating curve extended above 900 ft<sup>3</sup>/s.



06304500 LITTLE GOOSE CREEK AT SHERIDAN, WY

LOCATION.--Lat 44°48'10", long 106°57'10", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.26, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, at bridge on Sheridan Avenue in Sheridan and 0.6 mi upstream from mouth.

PERIOD OF RECORD.--March 1979 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 23...	1245	34	673	13.3	128	8.4	656	12.0	8.0	<.041	<.047	<.006	E.011
FEB 13...	1345	12	--	--	--	7.8	643	-6.0	.00	E.026	.422	E.003	<.018
MAY 30...	0715	6.8	672	6.4	71	7.7	984	12.0	14.5	<.040	<.050	<.006	<.020
JUL 18...	1755	3.2	665	10	149	8.2	911	31.0	28.5	E.021	<.050	<.006	<.020

DATE	E COLI, MTEC MF WATER (COL./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)
OCT 23...	52	82
FEB 13...	<1	E2k
MAY 30...	E1300k	E1200k
JUL 18...	160	240

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## YELLOWSTONE RIVER BASIN

06305500 GOOSE CREEK BELOW SHERIDAN, WY

LOCATION.--Lat 44°49'25", long 106°57'40", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.15, T.56 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, 700 ft north of Sheridan city limits and 0.2 mi downstream from Soldier Creek.

DRAINAGE AREA.--392 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1959-65, 1968 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
OCT 23...	1400	79	672	14.8	146	8.4	660	15.0	9.0	<.041	.414	<.006	.112
FEB 13...	1515	46	--	--	--	7.9	624	-6.5	.00	E.024	.324	E.004	.137
MAY 29...	1630	55	665	8.7	110	8.5	395	16.0	20.0	<.040	E.045	<.006	.148
JUL 18...	1645	4.5	666	11.8	167	8.4	853	32.5	25.5	E.021	.186	.007	.402

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 23...	120	69
FEB 13...	E10k	100
MAY 29...	>800	E3300k
JUL 18...	160	140

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

06305700 GOOSE CREEK NEAR ACME, WY

LOCATION.--Lat 44°53'11", long 106°59'18", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.28, T.57 N., R.84 W., Sheridan County, Hydrologic Unit 10090101, on right bank 0.2 mi north of county road, 1.6 mi south of Acme, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--411 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by many small reservoirs, combined capacity, about 15,000 acre-ft. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	77	e65	e64	e68	e50	e85	103	43	23	6.5	12
2	86	78	e60	e64	e79	e52	e86	92	32	25	7.2	11
3	89	73	e68	e76	e72	e64	e82	71	35	21	9.5	10
4	80	70	e68	e72	e62	e56	e86	61	74	16	12	9.1
5	85	77	e69	e67	e76	e62	e92	55	92	13	11	6.9
6	86	78	e70	e71	e66	e80	e90	58	69	11	7.9	7.4
7	85	71	e70	e68	e58	e70	e92	57	47	9.6	12	26
8	81	e50	e70	e60	e40	e71	e90	48	33	11	17	58
9	83	e54	e50	e55	e38	e76	e78	39	24	9.1	20	40
10	85	e50	e49	e66	e42	e74	e72	38	21	9.3	27	35
11	82	e45	e38	e64	e47	e72	e88	38	18	5.0	42	31
12	80	e45	e39	e68	e45	e84	e90	30	25	4.4	52	31
13	79	e49	e42	e78	e51	e80	e78	29	53	9.8	64	35
14	76	e54	e51	e74	e43	e80	e76	22	79	7.7	80	33
15	78	e58	e45	e70	e48	e60	e77	23	76	7.6	80	42
16	78	e54	e39	e60	e42	e64	e78	58	64	7.1	88	54
17	75	e56	e58	e54	e48	e66	e72	132	53	8.3	108	48
18	73	e54	e50	e62	e54	e78	e88	95	45	7.3	108	41
19	74	e60	e52	e58	e68	e76	e105	65	38	6.3	131	38
20	73	e54	e43	e62	e74	e82	e108	53	33	6.5	159	35
21	74	e60	e40	e56	e62	e80	e100	59	33	5.4	103	29
22	77	e65	e54	e66	e64	e76	e94	39	27	4.3	5.1	27
23	77	e66	e52	e58	e69	e80	e88	26	18	4.6	e4.0	26
24	80	e64	e52	e54	e69	e72	e98	17	18	21	e3.0	28
25	84	e66	e54	e62	e62	e68	e94	13	19	7.5	e3.3	28
26	86	e68	e52	e54	e54	e78	e100	12	18	6.4	e4.0	24
27	84	e66	e67	e52	e50	e73	e100	32	18	6.2	e5.0	21
28	80	e62	e75	e50	e45	e72	e110	73	23	5.3	e6.0	19
29	77	e58	e62	e52	---	e86	e100	64	25	5.9	e6.2	18
30	75	e69	e72	e62	---	e84	e100	66	23	4.9	e7.0	18
31	76	---	e57	e72	---	e60	---	57	---	5.3	e8.5	---
TOTAL	2487	1851	1733	1951	1596	2226	2697	1625	1176	294.8	1197.2	841.4
MEAN	80.2	61.7	55.9	62.9	57.0	71.8	89.9	52.4	39.2	9.51	38.6	28.0
MAX	89	78	75	78	79	86	110	132	92	25	159	58
MIN	73	45	38	50	38	50	72	12	18	4.3	3.0	6.9
AC-FT	4930	3670	3440	3870	3170	4420	5350	3220	2330	585	2370	1670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	106	97.0	80.7	71.3	87.4	101	136	396	593	153	63.2	87.9						
MAX	156	144	107	109	137	185	195	891	1592	547	157	158						
(WY)	1985	1999	1996	1990	1996	1994	1994	1984	1995	1995	1998	1998						
MIN	49.9	59.4	54.2	48.4	36.7	70.3	72.0	52.4	39.2	9.51	15.6	28.0						
(WY)	1989	1989	1986	1989	1989	1992	1989	2001	2001	2001	1988	2001						

## YELLOWSTONE RIVER BASIN

06305700 GOOSE CREEK NEAR ACME, WY--Continued

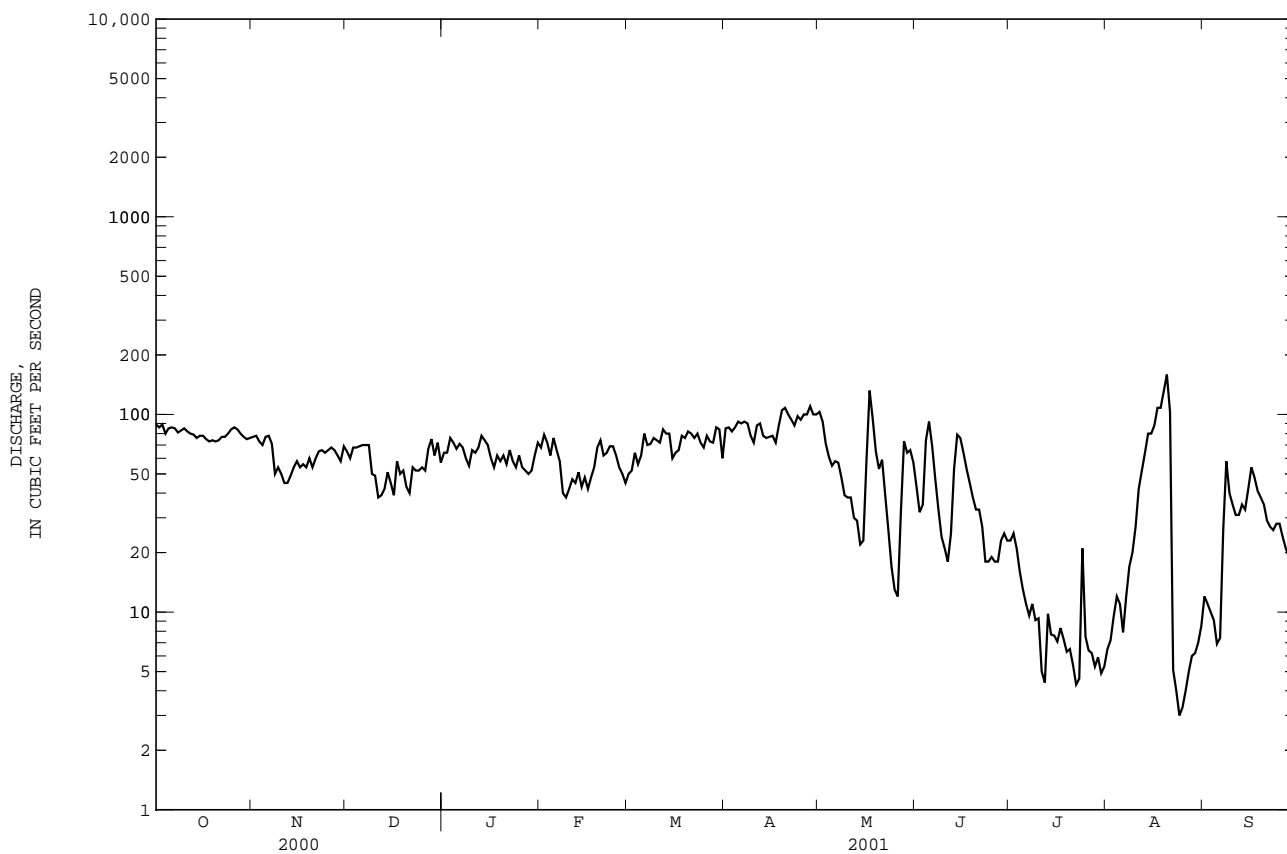
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1984 - 2001	
ANNUAL TOTAL	46891		19675.4		--	
ANNUAL MEAN	128		53.9		158	
HIGHEST ANNUAL MEAN	--		--		303	1995
LOWEST ANNUAL MEAN	--		--		53.9	2001
HIGHEST DAILY MEAN	1660	May 18	159	Aug 20	3040	Jun 17 1995
LOWEST DAILY MEAN	23	Jul 27-29	3.0	Aug 24	3.0	Aug 24 2001
		Aug 2,3				
		Jul 27				
ANNUAL SEVEN-DAY MINIMUM	24		4.3 <sup>a</sup>	Aug 22	4.3	Aug 22 2001
MAXIMUM PEAK FLOW	--		151 <sup>a</sup>	May 16	3330	Jun 17 1995
MAXIMUM PEAK STAGE	--		3.31 <sup>b</sup>	Jan 9	7.65 <sup>c</sup>	Feb 25 1986
ANNUAL RUNOFF (AC-FT)	93010		39030		114700	
10 PERCENT EXCEEDS	243		86		351	
50 PERCENT EXCEEDS	73		58		93	
90 PERCENT EXCEEDS	36		9.2		42	

a Gage height, 3.03 ft.

b Backwater from ice.

c From floodmarks, backwater from ice.

e Estimated.



06306250 PRAIRIE DOG CREEK NEAR ACME, WY

LOCATION.--Lat 44°59'02", long 106°50'21", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 23, T.58 N., R.83 W., Sheridan County, Hydrologic Unit 10090101, on right bank 600 ft upstream from county bridge, 0.9 mi upstream from mouth, 2.8 mi downstream from Coutant Creek, and 7.6 mi northeast of Acme.

## WATER-DISCHARGE RECORDS

DRAINAGE AREA.--358 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1970 to September 1979, June 2000 to current year. Records for May 1965 to September 1970 in files of Office of Wyoming State Engineer.

GAGE.--Water-stage recorder. Elevation of gage is 3,450 ft, from topographic map.

REMARKS.--Records fair except those for Mar. 15 to May 9, and those for estimated daily discharges, which are poor. Diversions for irrigation of about 13,600 acres above station, of which about 60 acres are below station. Flow supplemented by 3 transbasin diversions from North Piney Creek and South Piney Creek via Prairie Dog Creek ditch, Piney and Cruse ditch, and Mead-Coffeen ditch.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	19	e15	e16	e18	e19	39	27	.71	9.6	3.2	1.4
2	46	21	e14	e17	e19	e22	36	25	.79	4.8	2.9	3.8
3	45	24	e15	e20	e18	e23	34	26	.92	1.8	3.1	4.0
4	44	24	e16	e19	e18	e24	34	22	1.5	1.4	2.8	2.8
5	40	22	e17	e21	e18	e27	32	20	1.3	.68	2.3	2.3
6	40	21	e19	e19	e17	e36	29	17	2.8	.63	2.8	2.1
7	42	e16	e18	e17	e14	e43	29	16	2.6	.48	2.7	5.0
8	42	e14	e15	e16	e12	e47	28	9.2	1.7	.55	3.2	13
9	44	e13	e13	e17	e13	e62	26	9.2	1.8	.58	3.1	20
10	52	e13	e11	e18	e14	e100	24	14	1.8	1.0	2.3	18
11	46	e12	e10	e17	e15	e200	20	12	1.8	.98	1.3	15
12	36	e13	e9.0	e17	e16	e130	18	7.9	2.0	.77	1.9	14
13	32	e15	e10	e17	e16	e60	17	11	4.8	.75	2.3	15
14	29	e15	e11	e17	e14	e66	16	7.8	17	8.1	3.2	16
15	27	e15	e10	e16	e15	56	16	2.6	30	13	2.7	16
16	27	e15	e9.6	e16	e14	42	15	1.6	44	8.7	4.3	16
17	27	e15	e11	e15	e15	45	14	1.2	46	7.2	3.9	19
18	26	e16	e12	e16	e17	45	14	1.0	47	6.9	3.1	20
19	25	e15	e13	e16	e16	42	14	.71	45	5.3	3.4	19
20	25	e16	e12	e16	e16	42	14	1.0	40	4.5	4.4	17
21	25	e17	e11	e15	e15	43	19	.94	34	5.4	3.8	17
22	24	e18	e13	e16	e17	43	20	.75	30	3.9	3.3	17
23	24	e18	e12	e15	e16	44	23	.80	27	4.8	3.0	19
24	25	e17	e12	e14	e15	46	23	.85	27	5.7	2.2	19
25	25	e16	e13	e16	e15	42	21	.88	24	6.5	4.1	18
26	24	e16	e15	e16	e14	40	17	.94	19	5.9	4.0	18
27	24	e15	e18	e15	e13	40	15	1.1	16	6.2	3.7	16
28	21	e15	e17	e14	e12	41	13	.86	13	5.8	3.6	14
29	20	e13	e15	e16	---	40	14	1.2	11	6.3	2.6	13
30	20	e14	e16	e15	---	35	20	.99	8.9	3.9	1.7	13
31	19	---	e15	e16	---	38	---	.83	---	3.9	2.0	---
TOTAL	1002	493	417.6	511	432	1583	654	242.35	503.42	136.02	92.9	403.4
MEAN	32.3	16.4	13.5	16.5	15.4	51.1	21.8	7.82	16.8	4.39	3.00	13.4
MAX	56	24	19	21	19	200	39	27	47	13	4.4	20
MIN	19	12	9.0	14	12	19	13	.71	.71	.48	1.3	1.4
AC-FT	1990	978	828	1010	857	3140	1300	481	999	270	184	800

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2001, BY WATER YEAR (WY)\*

MEAN	40.1	31.4	25.3	19.7	38.1	82.6	64.1	92.1	38.6	20.3	26.2	38.0
MAX	59.5	43.6	32.3	26.7	82.7	167	101	384	86.2	45.0	45.7	79.0
(WY)	1974	1974	1976	1974	1974	1972	1971	1978	1978	1975	1978	1973
MIN	22.3	16.4	13.5	13.5	15.4	36.5	21.8	7.82	16.8	4.39	3.00	13.4
(WY)	1976	2001	2001	1975	2001	1977	2001	2001	2001	2001	2001	2001

## YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*		FOR 2001 WATER YEAR		WATER YEARS 1971 - 2001	
ANNUAL TOTAL	--		6470.69		--	
ANNUAL MEAN	--		17.7		43.3	
HIGHEST ANNUAL MEAN	--		--		72.8	1978
LOWEST ANNUAL MEAN	--		--		17.7	2001
HIGHEST DAILY MEAN	81	Sep 27	200	Mar 11	3090	May 19 1978
LOWEST DAILY MEAN	2.2	Jul 13	.48	Jul 7	.48	Jul 7 2001
ANNUAL SEVEN-DAY MINIMUM	--		.70	Jul 5	.70	Jul 5 2001
MAXIMUM PEAK FLOW	88	Sep 27	260 <sup>a</sup>	Mar 11	3940 <sup>b</sup>	May 18 1978
MAXIMUM PEAK STAGE	274	Sep 27	4.71 <sup>c</sup>	Mar 11	12.60 <sup>d</sup>	May 18 1978
ANNUAL RUNOFF (AC-FT)	--		12830		31380	
10 PERCENT EXCEEDS	--		40		70	
50 PERCENT EXCEEDS	--		15		31	
90 PERCENT EXCEEDS	--		1.8		13	

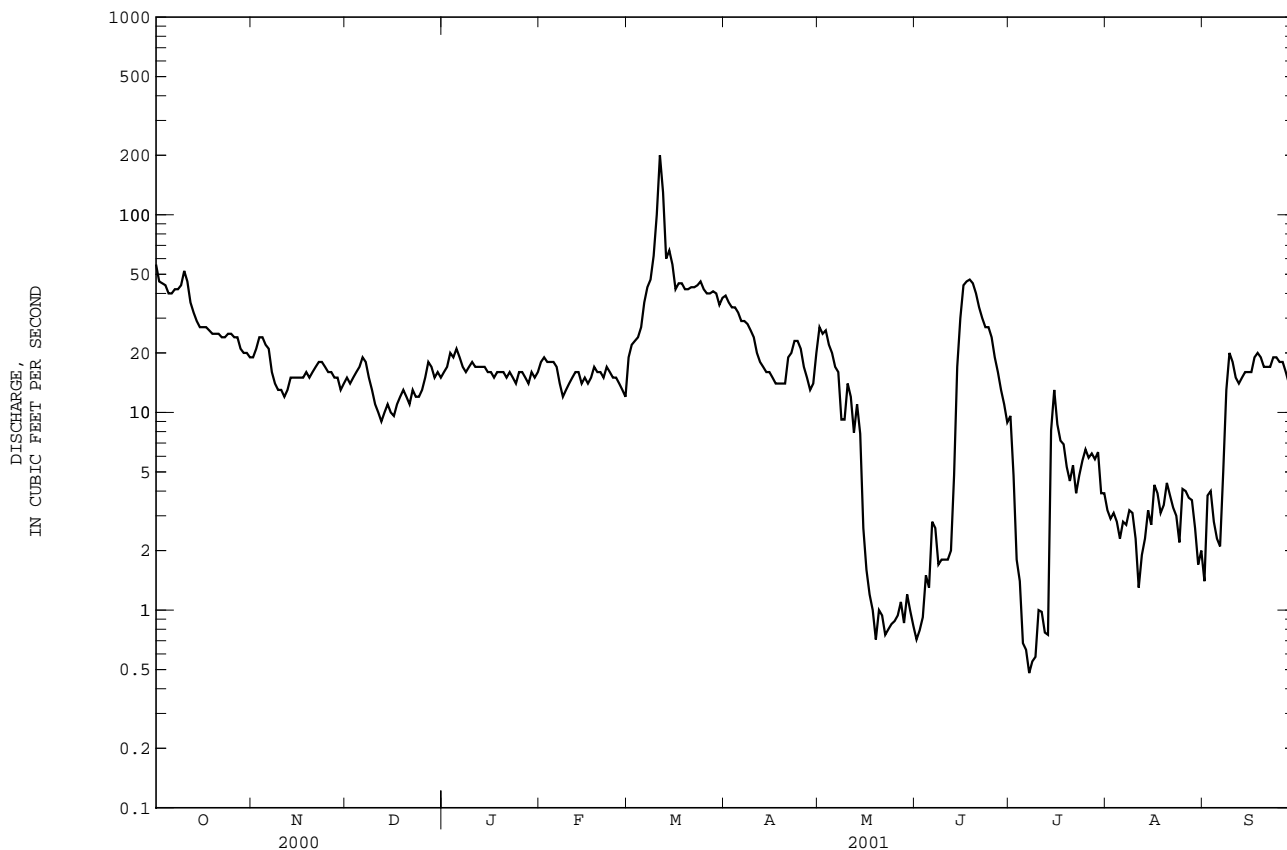
\* For period of operation.

a About.

b From rating curve extended above 760 ft<sup>3</sup>/s on basis of slope-area determination of peak flow.

c Backwater from ice.

e Estimated.





06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-1992, April 2000 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	
		(00061)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00900)	(00915)	(00925)	(00935)	
OCT 24...	0805	27	675	10.4	96	--	1390	4.0	6.5	670	131	84.4	7.46	
NOV 28...	1030	15	678	11.1	86	8.3	1430	1.5	.00	730	147	88.3	7.04	
DEC 14...	0815	11	666	9.6	76	7.9	1640	-15.0	.00	870	172	106	8.13	
JAN 11...	1650	E17	--	10.7	--	7.9	1490	-5.0	.00	720	143	88.6	7.52	
FEB 13...	0945	16	--	--	--	8.0	1600	-5.0	.00	770	150	95.5	6.92	
MAR 13...	0940	63	670	10.7	83	7.9	993	9.5	.00	430	80.6	54.6	12.4	
APR 11...	1415	20	670	10.8	105	8.1	1470	8.5	8.5	730	140	92.5	8.51	
MAY 09...	1615	28	670	10.4	127	8.3	1410	21.0	18.5	610	111	79.7	7.69	
JUN 08...	1900	1.8	675	8.6	115	8.1	1560	26.0	23.5	670	121	88.6	8.45	
JUL 19...	0750	5.1	674	7.7	91	7.7	1870	18.5	17.0	810	152	105	9.09	
AUG 15...	1150	3.3	677	10.3	129	7.9	2180	28.5	20.0	920	157	127	11.9	
SEP 12...	1200	15	--	--	--	7.9	1330	24.0	15.0	610	118	75.4	7.08	
DATE		SODIUM AD-SORP-TION RATIO	SODIUM, DIS-SOLVED (MG/L AS NA)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ANTI-MONY, DIS-SOLVED (UG/L AS SB)
		(00931)	(00930)	(29801)	(00940)	(00950)	(00955)	(00945)	(70303)	(70302)	(70300)	(70301)	(01106)	(01095)
OCT 24...	1	63.6	351	4.6	.3	11.0	466	1.36	72.9	1000	978	--	--	
NOV 28...	1	64.3	390	4.8	.3	13.4	476	1.53	45.4	1120	1040	--	--	
DEC 14...	1	80.0	440	5.5	.3	15.1	594	1.77	38.7	1300	1250	--	--	
JAN 11...	1	72.3	398	4.2	.3	13.6	502	1.58	--	1160	1070	--	--	
FEB 13...	1	79.0	407	5.3	.3	13.7	532	1.70	54.1	1250	1130	--	--	
MAR 13...	1.0	47.4	227	5.7	.2	8.6	325	1.01	127	746	671	--	--	
APR 11...	1	79.3	330	6.0	.3	8.1	525	1.56	61.6	1150	1060	--	--	
MAY 09...	2	88.1	275	4.3	.3	10.4	510	1.46	81.2	1070	978	1	.09	
JUN 08...	2	102	279	4.3	.4	9.9	606	1.61	5.81	1180	1110	--	--	
JUL 19...	2	127	352	3.9	.3	14.0	720	1.95	19.7	1430	1340	1	.08	
AUG 15...	2	169	298	5.8	.3	12.9	935	2.35	15.4	1730	1600	3	.10	
SEP 12...	1	68.5	298	4.6	.3	13.8	475	1.27	37.9	936	943	2	.07	

## YELLOWSTONE RIVER BASIN

06306250 PRAIRIE DOG CREEK NEAR ACME, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 24...	<2.0	--	55.0	--	--	--	--	--	--	M	--	--	49.2
NOV 28...	<2.0	--	48.8	--	--	--	--	--	--	<10	--	--	50.4
DEC 14...	<2.0	--	54.4	--	--	--	--	--	--	<10	--	--	68.6
JAN 11...	<2.0	--	49.5	--	--	--	--	--	--	<10	--	--	50.7
FEB 13...	<2.0	--	48.6	--	--	--	--	--	--	<10	--	--	53.3
MAR 13...	<2.0	--	116	--	--	--	--	--	--	50	--	--	35.7
APR 11...	<2.0	--	47.0	--	--	--	--	--	--	<10	--	--	49.4
MAY 09...	<2.0	43.4	50.9	<.06	110	E.02	<.8	.43	2.8	<10	<.08	33.4	87.3
JUN 08...	<2.0	--	41.8	--	--	--	--	--	--	<10	--	--	106
JUL 19...	E1.4	64.5	62.1	<.06	159	<.04	<.8	.68	4.8	10	<.08	51.3	343
AUG 15...	E1.2	47.6	48.1	<.06	185	.04	<.8	.51	6.8	E20	E.05	57.2	195
SEP 12...	E1.1	39.5	46.0	<.06	118	.10	<.8	.41	4.9	<10	<.08	30.2	113

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 24...	--	--	--	--	--	--	--	--	--
NOV 28...	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--
MAY 09...	1.6	.09	.9	<1.0	1630	<.04	1.5	2	7.20
JUN 08...	--	--	--	--	--	--	--	--	--
JUL 19...	2.3	<.06	.7	<1.0	2060	<.04	.8	4	8.77
AUG 15...	2.7	<.06	1.6	<1.0	2380	<.04	.5	10	8.54
SEP 12...	1.6	<.06	.9	<1.0	1610	<.04	1.0	6	7.93

E -- Estimated value.

M -- Presence verified, not quantified.

## 06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT

LOCATION.--Lat 45°00'32", long 106°50'08", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.33, T.9 S., R.40 E., Big Horn County, Hydrologic Unit 10090101, on left bank 1 mi north of Wyoming-Montana State line, 1.4 mi southeast of Decker, 1.6 mi upstream from Badger Creek, and at river mile 200.9.

DRAINAGE AREA.--1,477 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year. Records published as "near Decker" May 1928 to September 1938, not equivalent owing to intervening drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,429.14 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Water-discharge records good except those for estimated daily discharges, which are poor. Flow regulated by many small reservoirs in Wyoming, combined capacity, about 15,000 acre-ft. Diversions for irrigation of about 64,300 acres upstream from station. U.S. Geological Survey satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	184	e165	e125	e190	e210	202	429	195	96	25	9.6
2	199	186	e165	e130	e190	e220	201	442	179	91	23	15
3	204	180	e170	e135	e200	e230	196	344	169	88	22	18
4	208	171	e160	e145	e190	e240	191	295	199	83	21	18
5	195	166	e160	e150	e200	e240	193	263	239	74	17	18
6	194	184	e170	e160	e190	e250	191	295	238	71	14	22
7	196	183	e160	e160	e180	e260	192	316	194	68	17	29
8	188	e170	e160	e160	e170	e250	192	269	169	54	16	68
9	186	e165	e150	e160	e160	e250	204	273	157	50	14	107
10	203	e170	e140	e170	e170	e280	202	348	150	48	13	107
11	204	e165	e130	e180	e180	e300	183	356	141	42	10	96
12	201	e175	e125	e170	e180	e280	178	345	138	46	9.3	87
13	188	e180	e130	e180	e190	e270	173	388	156	40	10	83
14	188	e185	e135	e190	e180	e260	165	476	202	51	13	88
15	186	e180	e140	e185	e190	e240	158	506	251	80	11	87
16	184	e175	e125	e185	e185	e230	154	507	263	62	13	97
17	183	e180	e145	e180	e200	e230	157	540	245	61	13	110
18	180	e190	e140	e180	e210	e230	156	441	223	53	11	107
19	175	e185	e135	e180	e220	e220	159	352	209	45	11	103
20	179	e180	e130	e190	e230	e230	180	304	197	38	13	96
21	177	e190	e125	e180	e240	e220	220	307	181	39	13	92
22	180	e185	e130	e190	e230	e220	234	261	170	34	15	89
23	187	e195	e130	e180	e240	e220	222	225	156	32	15	88
24	191	e200	e130	e190	e230	e210	205	201	143	96	9.6	86
25	202	e190	e135	e180	e220	e195	191	185	132	63	8.3	88
26	207	e180	e130	e180	e210	194	190	175	122	39	8.7	88
27	209	e170	e130	e175	e210	207	214	179	119	34	6.9	81
28	199	e170	e130	e170	e200	215	273	219	115	31	8.1	76
29	191	e165	e125	e180	---	203	326	283	111	31	8.6	76
30	188	e160	e130	e200	---	199	397	256	103	29	7.1	70
31	185	---	e125	e190	---	208	---	239	---	27	8.4	---
TOTAL	5960	5359	4355	5330	5585	7211	6099	10019	5266	1696	405.0	2199.6
MEAN	192	179	140	172	199	233	203	323	176	54.7	13.1	73.3
MAX	209	200	170	200	240	300	397	540	263	96	25	110
MIN	175	160	125	125	160	194	154	175	103	27	6.9	9.6
AC-FT	11820	10630	8640	10570	11080	14300	12100	19870	10450	3360	803	4360

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2001, BY WATER YEAR (WY)

	MEAN	257	226	181	179	232	308	360	1157	1670	470	178	220
MAX	403	324	271	330	672	855	676	3283	3570	1674	475	615	
(WY)	1969	1974	1976	1974	1971	1972	1977	1978	1978	1975	1968	1968	
MIN	116	133	102	95.9	84.5	129	124	323	176	54.7	13.1	73.3	
(WY)	1961	1989	1985	1985	1989	1961	1961	2001	2001	2001	2001	2001	

## YELLOWSTONE RIVER BASIN

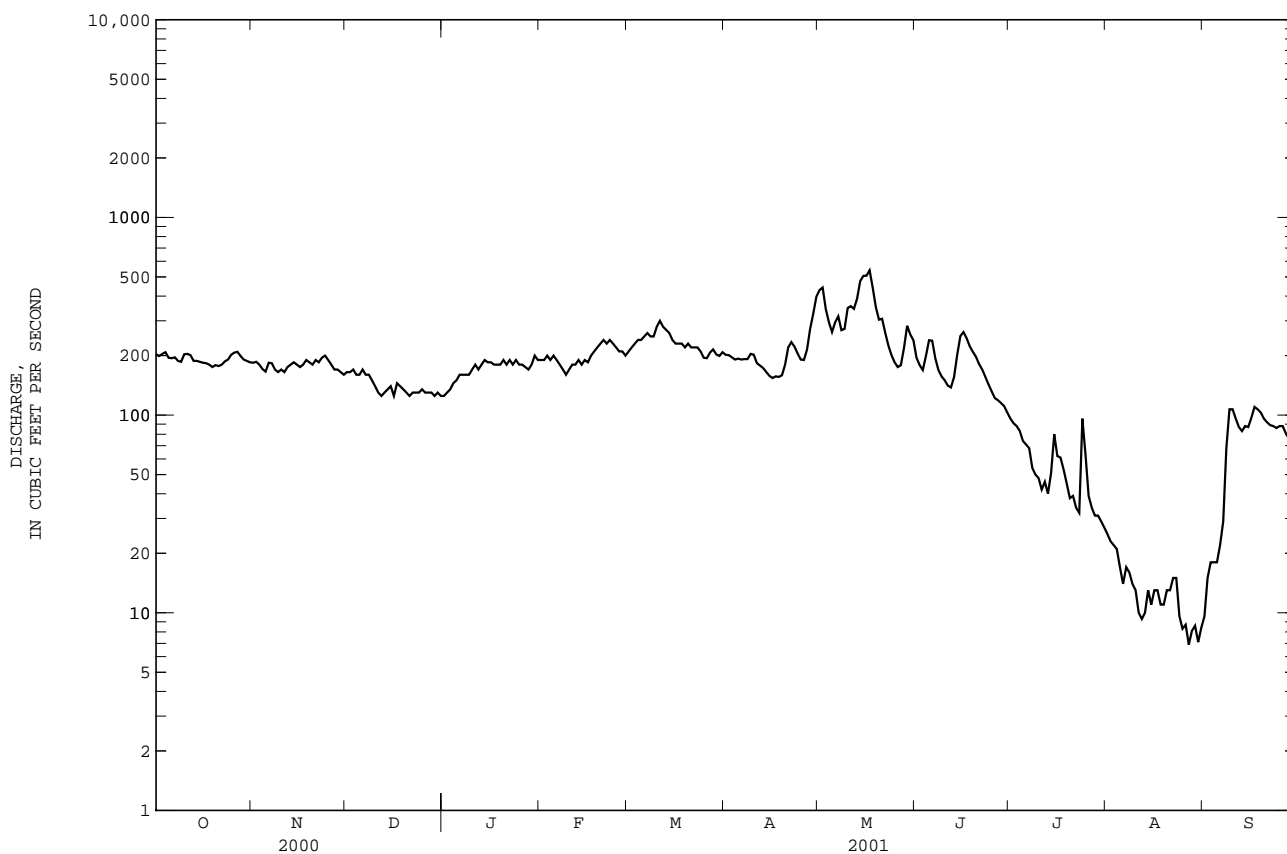
06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1961 - 2001	
ANNUAL TOTAL	127504		59484.6		--	
ANNUAL MEAN	348		163		453	
HIGHEST ANNUAL MEAN	--		--		862	1978
LOWEST ANNUAL MEAN	--		--		163	2001
HIGHEST DAILY MEAN	3210	May 18	540	May 17	15400	May 19 1978
LOWEST DAILY MEAN	75	Jan 3	6.9	Aug 27	5.4	Aug 24 1961
ANNUAL SEVEN-DAY MINIMUM	93	Sep 3	8.0	Aug 25	7.2	Aug 22 1961
MAXIMUM PEAK FLOW	--		645 <sup>a</sup>	May 15	17500	May 12 1978
MAXIMUM PEAK STAGE	--		5.07 <sup>b</sup>	Mar 11	14.25	May 12 1978
ANNUAL RUNOFF (AC-FT)	252900		118000		328200	
10 PERCENT EXCEEDS	780		250		1080	
50 PERCENT EXCEEDS	184		180		238	
90 PERCENT EXCEEDS	104		24		120	

a Gage height 3.66 ft.

b Backwater from ice.

e Estimated.



06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1965 to September 1976, November 1980 to December 1986, August 2000 to current year.

WATER TEMPERATURE: October 1965 to September 1976.

INSTRUMENTATION.--Specific conductance probe installed August 21, 2000.

REMARKS.--Unpublished records for many days of instantaneous water temperature and specific conductance are available in files of the Montana District office.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,490 microsiemens/cm August 12, 1966; minimum daily, 192 microsiemens/cm, June 7, 1976.

WATER TEMPERATURE: Maximum, 30.5°C, July 16, 1966; minimum, 0.0°C on many days during winter.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,420 microsiemens/cm, Aug. 29, 30; minimum daily, 243 microsiemens/cm, May 16.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 30...	1540	188	673	7.8	77	8.8	695	10.0	9.0	310	62.7	37.6	2.92	
NOV 28...	1215	E170	678	13.1	101	8.6	680	3.5	.00	330	68.3	37.9	2.55	
DEC 28...	1030	E130	--	--	--	8.3	568	.00	.00	250	55.2	28.4	1.90	
JAN 16...	1615	E185	677	13.6	105	8.3	586	.00	.00	250	52.6	28.6	1.98	
FEB 12...	1230	E180	673	10.9	85	8.0	622	-5.0	.00	280	57.8	32.0	2.15	
MAR 12...	1215	E280	664	9.2	78	8.2	497	10.0	2.5	200	40.4	23.1	8.36	
APR 11...	0750	185	670	7.8	72	8.4	812	8.0	6.5	370	74.7	44.2	3.46	
MAY 15...	1000	420	668	6.7	82	8.1	256	19.0	18.5	120	28.8	10.9	1.34	
JUN 19...	1115	212	679	8.4	98	8.4	570	17.5	17.0	250	50.6	29.9	2.87	
JUL 12...	1000	48	674	7.5	103	8.4	752	32.0	25.0	300	57.0	39.2	4.01	
AUG 24...	1030	10	673	7.0	89	8.3	1280	28.0	20.5	420	62.8	63.2	6.58	
SEP 04...	1030	18	673	5.2	66	8.2	1280	25.0	20.5	380	56.2	58.3	6.21	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-PT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT 30...	.8	31.5	220	3.8	.3	4.1	135	.56	208	410	.77	.009	<.001	
NOV 28...	.8	33.9	261	4.2	.4	6.8	127	.60	--	438	.18	.152	.009	
DEC 28...	.6	22.1	233	3.9	.3	9.4	77.4	.46	--	340	.26	.301	.006	
JAN 16...	.7	25.9	239	3.1	.3	7.6	75.4	.46	--	340	.14	.202	.003	
FEB 12...	.7	26.4	254	5.2	.3	8.9	94.3	.52	--	381	.18	.270	.006	
MAR 12...	.7	22.8	177	5.7	.2	7.1	73.8	.39	--	290	2.0	.379	.015	
APR 11...	1.0	42.2	250	5.6	.2	3.4	198	.71	260	521	.40	.021	.001	
MAY 15...	.3	8.5	106	1.2	.2	6.0	27.3	.20	168	148	.81	<.005	.001	
JUN 19...	.7	25.9	197	2.3	.3	5.2	104	.46	195	340	.46	.007	<.001	
JUL 12...	1	53.1	273	3.7	.4	13.3	139	.65	61.5	475	.46	.009	.001	
AUG 24...	3	118	340	6.3	.7	11.5	302	1.06	21.0	776	.56	<.005	<.001	
SEP 04...	3	124	356	6.7	.6	10.8	291	1.04	37.3	768	.53	E.008	<.001	

## YELLOWSTONE RIVER BASIN

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)
OCT 30...	.007	.023	--	--	--	--	--	--	--	--	--	--	--
NOV 28...	<.007	.016	--	--	--	--	--	--	--	--	--	--	--
DEC 28...	.029	.050	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	.027	.045	--	--	--	--	--	--	--	--	--	--	--
FEB 12...	.026	.049	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	.175	.278	--	--	--	--	--	--	--	--	--	--	--
APR 11...	.009	.054	--	--	--	--	--	--	--	--	--	--	--
MAY 15...	<.007	.160	2	E.04	.4	32.4	<.06	28	<.04	<.8	.13	.5	E.07
JUN 19...	<.007	.080	1	.08	.7	43.2	<.06	61	<.04	<.8	.27	1.4	.12
JUL 12...	.007	.071	1	.11	1.3	67.4	<.06	94	<.04	<.8	.34	1.7	<.08
AUG 24...	<.007	.062	<1	.11	1.2	73.7	<.06	128	.04	<.8	.31	3.2	.08
SEP 04...	<.007	.050	1	.10	1.1	74.9	<.06	133	<.04	<.8	.27	3.2	E.07
DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 30...	--	--	--	--	--	--	--	--	--	--	--	128	65
NOV 28...	--	--	--	--	--	--	--	--	--	--	--	67	--
DEC 28...	--	--	--	--	--	--	--	--	--	--	--	37	--
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	3	--
FEB 12...	--	--	--	--	--	--	--	--	--	--	--	36	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	--	39	--
APR 11...	--	--	--	--	--	--	--	--	--	--	--	124	62
MAY 15...	4.8	6.2	.3	.76	<.3	<1.0	116	<.04	1.0	1	.69	115	130
JUN 19...	14.3	15.6	.7	.97	.4	<1.0	407	<.04	1.5	<1	3.08	170	97
JUL 12...	25.9	33.3	1.1	1.38	.4	<1.0	420	<.04	2.3	1	3.66	85	11
AUG 24...	46.5	21.7	1.7	.54	.6	<1.0	762	<.04	1.9	2	5.76	84	2.3
SEP 04...	50.4	16.1	1.5	.31	.6	<1.0	741	<.04	1.7	2	5.32	122	5.9

E -- Estimated value.

06306300 TONGUE RIVER AT STATE LINE, NEAR DECKER, MT--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	578	730	653	569	497	610	802	414	438	746	1360	1410
2	585	728	663	566	475	629	795	380	457	747	1330	1370
3	599	733	665	571	459	636	802	401	473	721	1320	1360
4	600	733	648	572	460	624	805	427	471	713	1320	1270
5	617	737	643	576	458	602	797	465	491	728	1320	1210
6	625	729	643	568	446	595	789	479	514	725	1320	1170
7	636	732	634	565	443	577	780	450	520	709	1330	1140
8	642	756	624	573	448	563	772	441	507	714	1330	1160
9	652	784	622	593	468	548	766	456	524	719	1330	962
10	655	772	642	630	485	536	762	411	537	735	1330	918
11	643	830	676	632	497	514	782	364	544	760	1340	855
12	646	851	714	620	502	524	781	351	556	764	1340	844
13	661	843	744	597	505	573	782	346	568	776	1360	850
14	673	811	727	585	488	575	778	313	583	781	1360	848
15	683	804	711	579	498	570	780	260	586	812	1360	859
16	685	771	681	578	509	623	775	243	584	900	1350	859
17	696	744	652	591	513	687	770	286	568	908	1320	834
18	701	721	625	628	516	711	758	304	553	913	1310	832
19	705	691	609	627	519	728	766	287	572	925	1310	837
20	703	679	587	593	514	717	736	310	585	926	1300	828
21	712	672	578	569	517	739	727	329	593	956	1300	826
22	714	664	581	546	530	731	709	350	613	982	1310	828
23	706	658	586	552	531	745	701	379	638	936	1290	836
24	700	661	583	538	540	789	727	396	673	896	1240	845
25	708	659	572	534	543	816	741	418	684	1020	1230	839
26	702	653	569	543	546	834	743	414	694	1210	1290	840
27	694	651	568	533	577	831	712	414	709	1300	1390	843
28	692	653	567	540	592	817	622	403	713	1350	1380	858
29	696	662	567	554	---	814	533	418	709	1380	1420	862
30	710	662	560	549	---	793	467	455	710	1390	1420	861
31	739	---	570	532	---	785	---	410	---	1400	1390	---
MEAN	670	726	628	574	503	672	742	380	579	921	1330	962
MAX	739	851	744	632	592	834	805	479	713	1400	1420	1410
MIN	578	651	560	532	443	514	467	243	438	709	1230	826

LOCATION.--Lat 43°34'40", long 107°08'16", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.26, T.42 N., R.86 W., Washakie County, Hydrologic Unit 10090201, on left bank 1,100 ft downstream from Rock Creek and 13 mi southwest of Barnum.

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,220 ft above sea level, from topographic map. Prior to Oct. 1, 1970, at site 1,000 ft upstream at different datum. Oct. 1, 1970 to Aug. 17, 1987, at site 100 ft upstream at datum 6.78 ft higher (gage operated concurrently with present site Sept. 15, 1983 to Aug. 17, 1987).

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	e5.6	e5.0	4.8	e5.2	e4.7	7.3	e160	20	6.5	5.0	4.8
2	6.6	e5.2	e5.8	4.7	e5.2	e4.8	7.6	e140	19	6.3	5.0	4.7
3	6.6	e5.6	e5.6	4.6	e5.2	e5.0	7.7	e110	21	6.1	5.0	4.5
4	6.6	e5.8	e5.6	4.6	5.1	e5.0	8.9	e90	20	6.0	5.0	4.5
5	6.6	e6.2	5.5	4.8	5.0	e5.0	10	e80	19	6.3	5.0	4.5
6	6.6	e5.6	5.5	4.8	4.9	e5.0	12	e66	16	5.7	5.0	4.5
7	6.5	e5.0	5.3	4.8	e4.6	e5.4	12	e54	15	5.8	4.8	4.8
8	6.7	e5.2	5.3	e4.6	e4.1	e5.6	11	63	14	5.6	4.8	5.1
9	6.7	e5.4	5.3	e4.8	e4.5	e6.2	11	77	13	54	4.8	4.8
10	6.6	e5.2	5.2	e5.0	e4.6	e5.4	10	76	13	13	5.0	4.8
11	6.8	e4.8	e5.0	4.9	e4.7	e5.6	9.9	71	13	9.0	4.9	4.9
12	6.7	e5.0	e5.0	4.8	e4.9	e5.8	9.1	68	13	6.2	4.8	5.0
13	6.6	e5.2	e5.0	4.7	e4.6	e7.0	9.3	67	15	6.2	4.8	4.8
14	6.6	e5.6	e5.0	4.5	e4.4	e5.2	8.5	70	17	6.4	4.8	5.4
15	6.3	e5.8	e5.2	e4.6	e4.4	7.2	10	66	19	5.6	4.8	6.9
16	6.3	e5.8	e5.0	e4.6	e4.4	8.2	8.7	68	16	5.6	4.8	4.8
17	6.3	6.0	e4.9	e4.4	e4.3	8.1	11	54	13	5.4	4.8	4.8
18	6.3	6.0	e5.0	e4.5	e4.2	7.1	18	45	12	5.3	4.8	4.8
19	5.9	6.0	e5.2	e4.7	e4.2	6.0	23	40	11	5.3	4.8	4.7
20	5.6	6.0	e5.4	e5.0	e4.1	6.6	21	40	10	5.3	4.8	4.5
21	5.6	6.0	e5.2	e5.0	e4.0	7.4	16	41	9.7	5.3	4.8	4.5
22	5.6	6.0	e5.0	e4.8	e4.2	7.9	14	37	9.0	5.3	4.8	4.5
23	5.6	6.0	e5.0	4.7	e4.1	9.0	13	33	8.7	5.3	4.8	4.5
24	5.6	5.7	e5.0	4.8	e4.0	8.0	14	29	8.7	5.3	4.8	4.8
25	8.0	5.6	e5.0	5.0	e4.0	7.7	22	27	8.4	5.0	4.8	4.8
26	7.5	5.6	5.0	5.1	e3.9	7.5	33	26	7.9	5.0	4.8	4.8
27	6.9	5.6	5.0	5.3	e3.8	6.5	46	33	7.7	5.0	4.8	4.8
28	6.3	5.6	5.0	5.3	e4.3	9.9	69	27	7.3	5.0	4.8	4.8
29	6.2	5.6	5.0	e5.2	---	7.2	103	24	6.9	5.0	4.8	4.8
30	6.0	5.2	5.1	e5.2	---	6.6	137	22	6.8	5.0	4.8	4.8
31	e6.0	---	4.8	e5.2	---	7.8	---	21	---	5.0	4.8	---
TOTAL	198.8	167.9	159.9	149.8	124.9	204.4	693.0	1825	390.1	231.8	150.3	144.7
MEAN	6.41	5.60	5.16	4.83	4.46	6.59	23.1	58.9	13.0	7.48	4.85	4.82
MAX	8.0	6.2	5.8	5.3	5.2	9.9	137	160	21	54	5.0	6.9
MIN	5.6	4.8	4.8	4.4	3.8	4.7	7.3	21	6.8	5.0	4.8	4.5
AC-FT	394	333	317	297	248	405	1370	3620	774	460	298	287

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

MEAN	7.16	6.65	5.76	5.22	5.37	6.78	34.3	160	91.9	18.3	8.71	7.34
MAX	15.1	22.9	10.3	7.78	10.1	14.2	106	326	299	39.9	18.3	17.0
(WY)	1999	1999	1999	1983	1969	1972	1987	1999	1975	1975	1968	1968
MIN	2.45	2.00	2.75	2.48	3.74	4.05	8.00	56.2	13.0	7.26	4.34	4.16
(WY)	1963	1963	1962	1962	1989	1965	1970	1992	2001	1974	1966	1966



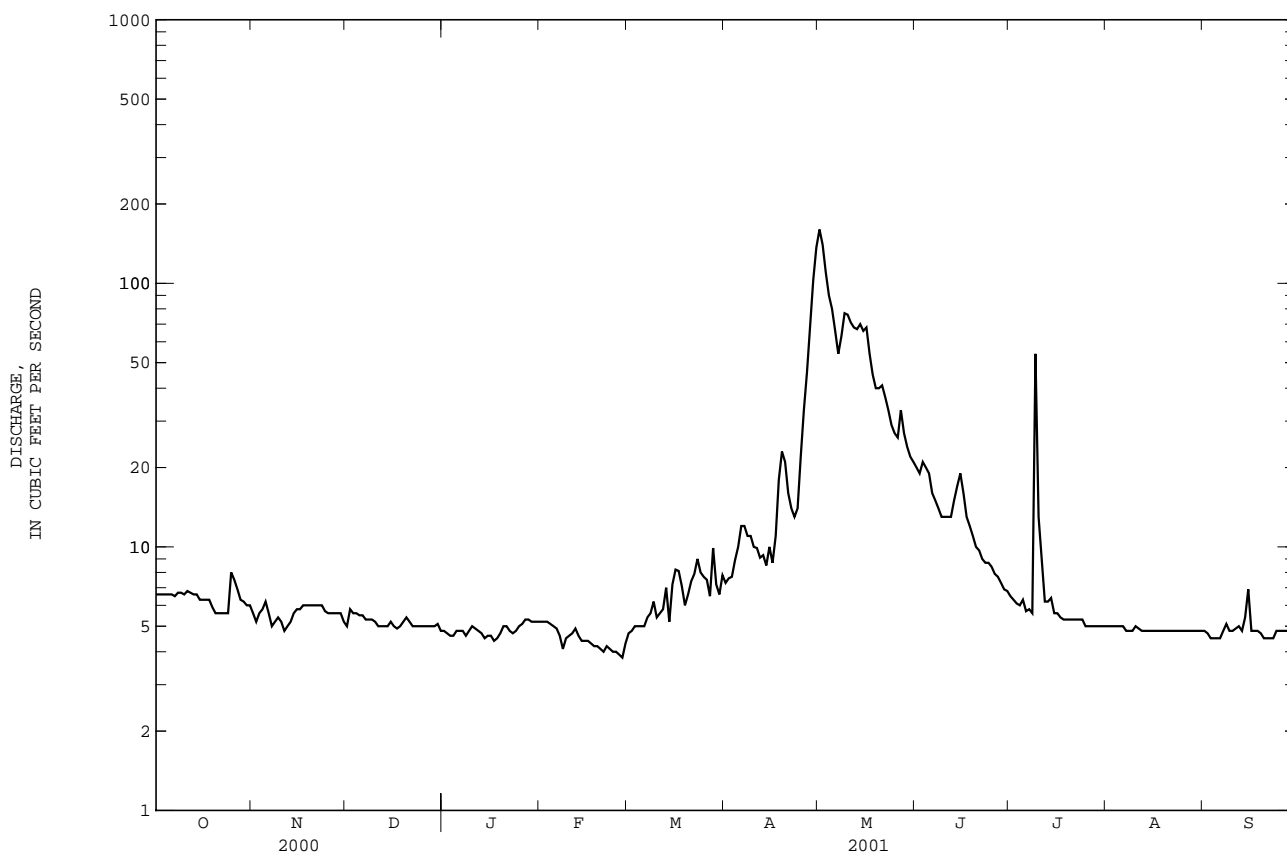
06309200 MIDDLE FORK POWDER RIVER NEAR BARNUM, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1962 - 2001	
ANNUAL TOTAL	8801.6		4440.6		--	
ANNUAL MEAN	24.0		12.2		30.0	
HIGHEST ANNUAL MEAN	--		--		51.4	
LOWEST ANNUAL MEAN	--		--		12.2	
HIGHEST DAILY MEAN	281	May 5	160	May 1	954	Apr 29 1999
LOWEST DAILY MEAN	4.8	Nov 11	3.8	Feb 27	1.0	Dec 15 1964
ANNUAL SEVEN-DAY MINIMUM	5.0	Dec 25	4.0	Feb 21	1.2	Jan 22 1966
MAXIMUM PEAK FLOW	--		1040	Jul 9	7110 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	--		9.40	Jul 9	12.60 <sup>b</sup>	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	17460		8810		21700	
10 PERCENT EXCEEDS	58		22		75	
50 PERCENT EXCEEDS	7.9		5.6		7.2	
90 PERCENT EXCEEDS	5.5		4.7		4.6	

a On basis of slope-area measurement of peak flow.

b From floodmarks, site and datum then in use.

e Estimated.



## YELLOWSTONE RIVER BASIN

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY

LOCATION.--Lat 44°01'40", long 107°04'49", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.21, T.47 N., R.85 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.5 mi upstream from Dullknife Reservoir, 0.6 mi downstream from Twin Creek, 7.2 mi southwest of Hazelton, and 19 mi northwest of Mayoworth.

DRAINAGE AREA.--24.5 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1946 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1279: 1947-48(M), 1949, 1950-51(M), 1952. WDR WY-98: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 8,180 ft above sea level, from topographic map. Prior to Oct. 1, 1966, at site 0.7 mi downstream at different datum. Oct. 1, 1966 to Aug. 26, 1986, at site 0.1 mi upstream at different datum.

REMARKS.--Records good except those for May 7 to June 18, which are fair, and those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.6	3.5	2.3	2.2	e1.3	e1.3	1.7	e50	10	5.1	2.8	2.0
2	e3.6	3.6	2.4	2.2	e1.4	e1.4	1.6	38	10	4.8	2.7	1.9
3	e3.6	3.3	2.5	2.3	e1.4	e1.4	1.7	18	15	4.5	2.7	1.9
4	e3.6	3.8	2.5	2.3	e1.5	e1.5	1.7	17	15	4.4	2.7	1.8
5	e3.6	3.4	2.5	2.4	e1.4	e1.4	1.7	28	14	4.7	2.7	1.9
6	e3.6	3.2	2.5	2.2	e1.4	e1.4	1.8	33	11	4.4	2.5	3.0
7	e3.5	3.1	2.5	e2.1	e1.3	e1.5	1.7	19	10	4.3	2.4	4.1
8	e3.5	3.0	2.6	e2.1	e1.3	e1.5	1.7	22	9.1	4.2	2.7	4.4
9	e3.5	3.5	2.6	e2.1	e1.2	e1.5	1.6	36	8.6	5.6	3.3	4.2
10	e3.5	3.3	2.6	e2.0	e1.2	e1.4	1.6	32	8.2	8.0	4.4	4.4
11	e3.6	2.8	2.5	e2.0	e1.2	e1.4	1.7	26	7.9	18	3.0	3.0
12	e3.4	2.6	e2.3	e2.1	e1.3	e1.5	1.7	25	8.8	7.6	2.7	2.5
13	e3.4	2.5	e2.4	e2.0	e1.4	e1.6	1.7	23	13	6.8	2.7	2.4
14	e3.4	2.4	e2.5	e1.9	e1.3	e1.5	1.8	22	14	6.4	2.7	3.3
15	e3.4	2.5	e2.4	e1.8	1.4	e1.4	1.8	20	13	9.8	4.0	8.2
16	e3.4	2.5	e2.3	e1.7	1.3	e1.4	1.8	24	11	7.6	3.5	3.9
17	e3.4	2.4	e2.3	e1.7	1.3	e1.5	2.1	17	9.0	5.2	3.2	3.0
18	3.4	2.4	e2.3	e1.7	1.3	e1.5	e2.5	13	8.5	4.5	2.7	2.9
19	3.4	2.6	e2.4	e1.8	1.3	e1.4	e5.0	13	8.2	4.3	2.5	2.7
20	3.3	2.6	e2.3	e1.7	1.3	e1.5	e9.0	13	8.1	4.0	2.5	2.5
21	3.4	2.5	2.3	e1.6	1.4	1.5	e8.0	13	7.4	3.8	2.6	2.5
22	3.5	2.5	2.2	e1.6	e1.4	1.6	e7.0	13	6.9	3.8	2.5	2.4
23	3.3	2.5	2.3	e1.5	1.6	1.6	e6.0	12	6.5	3.8	2.5	2.4
24	3.5	2.4	2.2	1.5	e1.5	1.6	e5.0	11	6.3	4.2	2.3	2.4
25	3.6	2.3	2.2	1.4	e1.4	1.6	e7.0	10	6.0	3.8	2.2	2.1
26	3.6	2.3	2.2	e1.4	e1.4	1.6	e10	11	5.7	3.7	2.1	2.1
27	3.4	2.4	2.3	e1.3	e1.4	1.6	e15	15	5.7	4.1	2.0	2.1
28	3.5	2.4	2.3	e1.3	e1.4	1.6	e20	18	5.4	3.5	2.0	2.1
29	3.3	2.3	2.2	e1.4	---	1.6	e30	23	5.1	3.3	2.0	2.1
30	3.3	2.3	2.4	e1.3	---	1.6	e40	14	5.1	3.0	2.0	2.2
31	3.5	---	2.2	e1.3	---	1.6	---	12	---	2.9	2.0	---
TOTAL	107.6	82.9	73.5	55.9	37.9	46.5	193.9	641	272.5	164.1	82.6	86.4
MEAN	3.47	2.76	2.37	1.80	1.35	1.50	6.46	20.7	9.08	5.29	2.66	2.88
MAX	3.6	3.8	2.6	2.4	1.5	1.6	40	50	15	18	4.4	8.2
MIN	3.3	2.3	2.2	1.3	1.2	1.3	1.6	10	5.1	2.9	2.0	1.8
AC-FT	213	164	146	111	75	92	385	1270	541	325	164	171

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	MEAN	4.37	3.52	2.82	2.31	2.14	2.25	9.11	60.4	64.0	17.1	7.02	5.01
MAX	10.4	10.1	6.96	4.50	4.00	4.99	35.7	119	178	46.8	13.3	9.74	
(WY)	1983	1983	1983	1958	1958	1960	1987	1947	1967	1975	1997	1982	
MIN	2.03	1.70	1.41	.80	1.00	1.19	1.09	20.7	9.08	4.88	2.66	2.47	
(WY)	1961	1981	1967	1949	1959	1967	1961	2001	2001	1960	2001	1960	

06311000 NORTH FORK POWDER RIVER NEAR HAZELTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1946 - 2001	
ANNUAL TOTAL	4883.2		1844.8		--	
ANNUAL MEAN	13.3		5.05		15.0	
HIGHEST ANNUAL MEAN	--		--		26.7	
LOWEST ANNUAL MEAN	--		--		5.05	
HIGHEST DAILY MEAN	142	May 17	50	May 1	354	Jun 15 1953
LOWEST DAILY MEAN	1.6	Feb 29	1.2	Feb 9	.60 <sup>a</sup>	Oct 30 1960
ANNUAL SEVEN-DAY MINIMUM	1.6	Feb 29	1.3	Feb 6	.64	Apr 12 1961
MAXIMUM PEAK FLOW	--		130 <sup>b</sup>	Apr 29	886 <sup>c</sup>	Jun 15 1953
MAXIMUM PEAK STAGE	--		4.38 <sup>d</sup>	Apr 29	6.21 <sup>f</sup>	May 14 1984
ANNUAL RUNOFF (AC-FT)	9690		3660		10900	
10 PERCENT EXCEEDS	43		13		43	
50 PERCENT EXCEEDS	3.3		2.5		3.9	
90 PERCENT EXCEEDS	1.8		1.4		1.9	

a May have been less during winter months of water years 1947 and 1948.

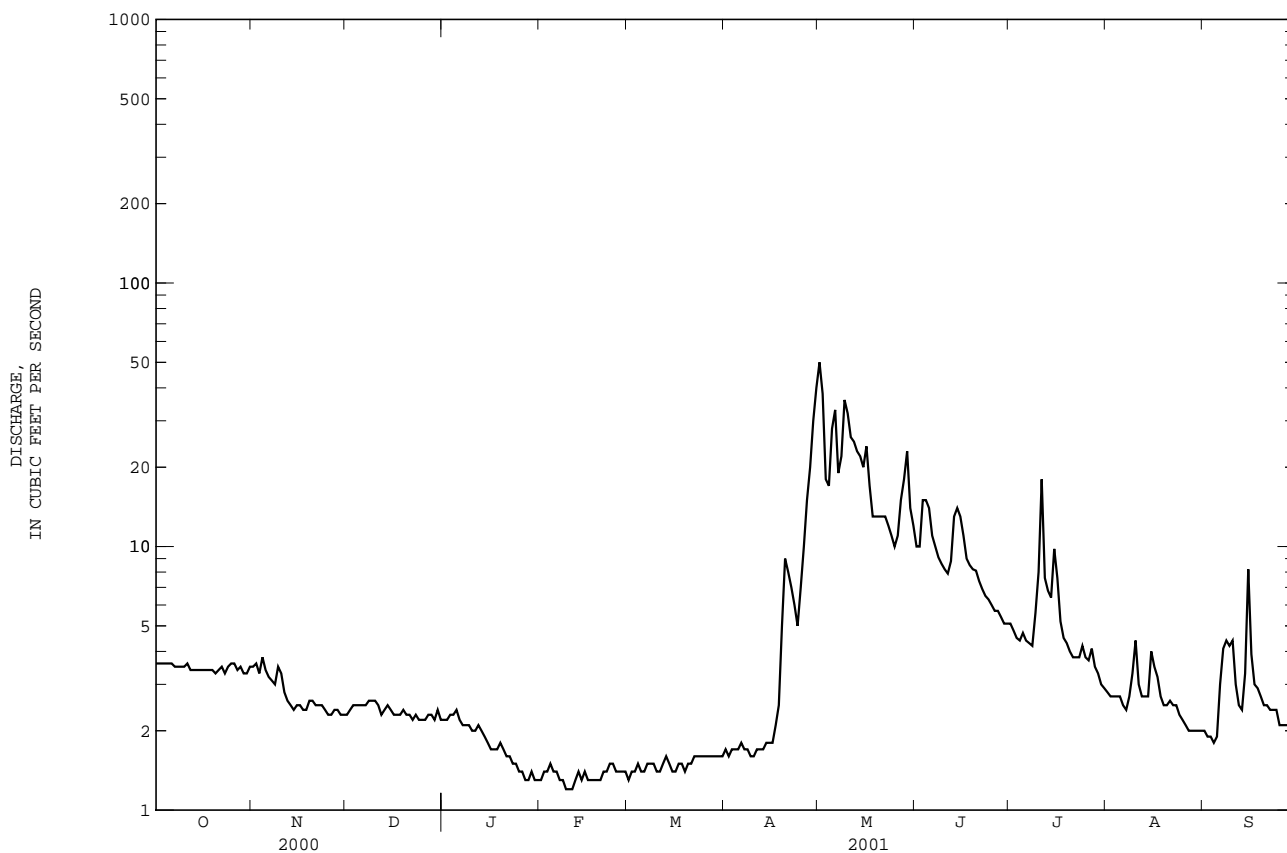
b About.

c Gage height, 4.34 ft, site and datum then in use, from rating curve extended above 110 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

d Backwater from ice.

e Estimated.

f Backwater from ice, site and datum then in use.



06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY

LOCATION.--Lat 43°54'41", long 106°53'20", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.36, T.46 N., R.84 W., Johnson County, Hydrologic Unit 10090201, on left bank 0.8 mi downstream from Pass Creek, 1.2 mi upstream from Hat Ranch, 7.2 mi northwest of Mayoworth, and 13 mi downstream from Dullknife Reservoir.

DRAINAGE AREA.--100 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,700 ft above sea level, from topographic map. Prior to Sept. 15, 1983, at site 60 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation for irrigation by Dullknife Reservoir 13 mi upstream, capacity, 4,350 acre-ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	23	21	21	20	20	20	27	27	22	40	20
2	24	23	21	21	20	20	20	26	32	22	40	20
3	23	22	21	21	20	20	20	24	36	21	39	19
4	23	22	21	21	20	20	19	22	37	21	38	19
5	23	22	21	21	20	20	19	22	38	21	38	19
6	23	22	21	21	20	20	19	22	38	21	38	19
7	23	22	21	21	e19	20	19	21	37	25	37	19
8	24	22	21	21	e15	20	19	20	37	27	36	19
9	23	22	21	21	e14	20	19	20	34	29	36	19
10	24	e17	e17	21	e15	20	19	21	33	34	36	19
11	23	e15	e15	21	e17	20	19	21	32	35	35	19
12	23	e17	e16	21	e16	20	19	20	33	36	34	18
13	23	21	e17	20	e17	20	19	19	33	37	32	18
14	23	22	e19	20	e16	20	19	19	32	31	29	18
15	23	23	e21	20	e17	20	19	19	32	29	25	18
16	24	23	e21	e19	e17	19	19	20	29	28	23	18
17	24	22	e21	e18	e17	19	19	19	28	27	22	18
18	24	22	e21	e19	e18	19	19	19	27	27	22	18
19	23	22	e21	21	19	20	19	19	27	27	21	18
20	23	22	21	21	19	20	19	20	27	27	21	18
21	23	22	e20	20	19	20	20	19	26	35	21	18
22	23	22	e21	20	19	20	19	18	25	41	21	18
23	23	22	21	20	19	20	19	18	24	44	21	18
24	23	21	21	20	19	20	19	18	24	44	20	18
25	23	21	21	21	19	20	19	18	24	43	20	17
26	23	21	21	21	19	20	19	22	24	43	20	17
27	23	21	22	20	19	20	20	24	24	43	20	17
28	23	21	21	20	e19	20	26	25	24	43	20	17
29	23	22	21	21	---	20	30	26	23	42	20	17
30	23	22	21	21	---	20	28	26	23	41	20	17
31	23	---	21	20	---	20	---	26	---	40	20	---
TOTAL	720	641	630	634	508	617	602	660	890	1006	865	547
MEAN	23.2	21.4	20.3	20.5	18.1	19.9	20.1	21.3	29.7	32.5	27.9	18.2
MAX	24	23	22	21	20	20	30	27	38	44	40	20
MIN	23	15	15	18	14	19	19	18	23	21	20	17
AC-FT	1430	1270	1250	1260	1010	1220	1190	1310	1770	2000	1720	1080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2001, BY WATER YEAR (WY)

	MEAN	22.0	19.6	19.0	18.5	18.1	18.1	27.0	77.4	89.9	46.2	39.1	32.1
MAX	31.5	25.3	23.1	21.0	22.0	21.1	47.9	176	193	80.5	52.4	53.8	
(WY)	1983	1999	1977	2000	2000	2000	1977	1978	1995	1975	1998	1997	
MIN	16.1	15.8	14.9	15.1	14.2	14.6	16.9	21.3	29.7	30.8	26.1	18.2	
(WY)	1990	1990	1991	1991	1991	1991	1993	2001	2001	1977	1985	2001	

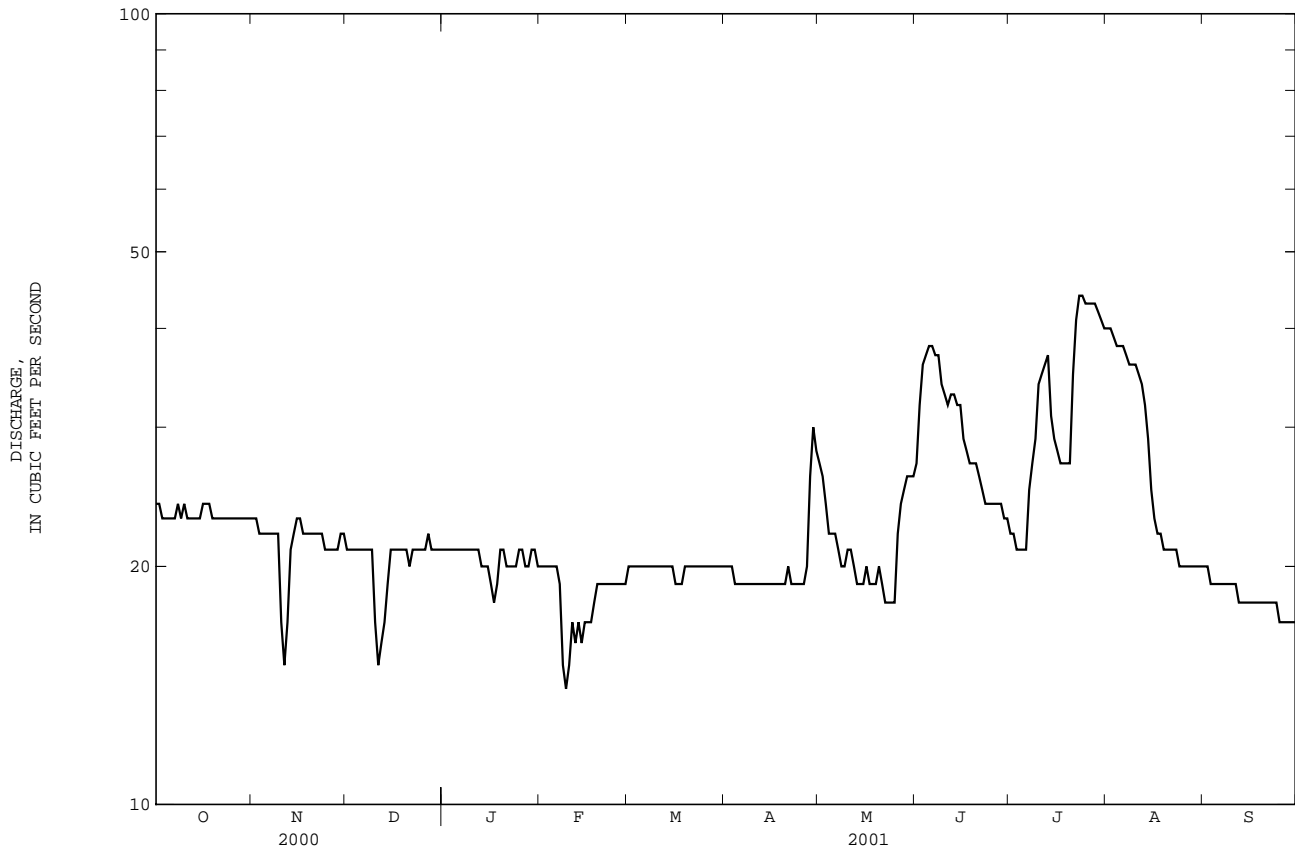
06311400 NORTH FORK POWDER RIVER BELOW PASS CREEK, NEAR MAYOWORTH, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1974 - 2001	
ANNUAL TOTAL	11124		8320		--	
ANNUAL MEAN	30.4		22.8		35.7	
HIGHEST ANNUAL MEAN	--		--		51.6	1978
LOWEST ANNUAL MEAN	--		--		22.8	2001
HIGHEST DAILY MEAN	93	May 24	44	Jul 23	379	Jun 5 1995
LOWEST DAILY MEAN	15	Nov 11	14	Feb 9	9.5	Feb 6 1991
ANNUAL SEVEN-DAY MINIMUM	18	Dec 8	16	Feb 8	11	Feb 5 1991
MAXIMUM PEAK FLOW	--		124	Jul 10	1590 <sup>a</sup>	Aug 1 1984
MAXIMUM PEAK STAGE	--		4.42	Jul 10	8.89 <sup>b</sup>	Aug 1 1984
ANNUAL RUNOFF (AC-FT)	22060		16500		25830	
10 PERCENT EXCEEDS	53		33		63	
50 PERCENT EXCEEDS	23		21		21	
90 PERCENT EXCEEDS	21		18		17	

a From rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.



## YELLOWSTONE RIVER BASIN

06313400 SALT CREEK NEAR SUSSEX, WY

LOCATION.--Lat 43°37'19", long 106°22'04", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.8, T.42 N., R.79 W., Johnson County, Hydrologic Unit 10090204, on left bank 200 ft upstream from bridge on West Sussex Dugout oil field road, 6.3 mi southwest of Sussex, and 12.6 mi upstream from mouth.

DRAINAGE AREA.--769 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1949, 1952, 1968 to 1981, October 1982 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 24...	1145	12	651	11.2	92	8.0	6240	2.5	.00	600	149	56.0	29.9
MAR 07...	0930	67	654	--	--	8.0	4210	4.0	.00	700	134	89.1	15.3
JUN 21...	0830	13	656	9.4	114	7.8	6220	17.0	16.5	700	151	79.8	34.9
AUG 20...	0945	13	648	12.3	156	8.2	5490	27.5	18.0	520	114	57.1	6.48
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)		
NOV 24...		19	1060	390	1110	2.4	34.8	1190	5.25	125	3860		
MAR 07...		12	705	226	273	1.1	10.3	1580	4.00	533	2940		
JUN 21...		18	1100	250	935	2.5	23.3	1610	5.56	144	4090		
AUG 20...		19	1000	201	958	2.9	26.1	1170	4.71	117	3460		

06313500 POWDER RIVER AT SUSSEX, WY

LOCATION.--Lat 43°41'44", long 106°18'24", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.13, T.43 N., R.79 W., Johnson County, Hydrologic Unit 10090202, 0.5 mi upstream from bridge on State Highway 192, 0.6 mi west of Sussex, and 2.7 mi downstream from Salt Creek.

DRAINAGE AREA.--3,090 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1949-53, 1967-68, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to September 1984.

WATER TEMPERATURE: October 1982 to September 1984.

SUSPENDED-SEDIMENT DISCHARGE: May 1983 to September 1984.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
NOV 24...	1355	122	653	12.2	98	8.2	1720	5.5	.00	480	119	44.1	5.95
MAR 07...	1140	341	655	9.5	76	7.9	2270	17.0	.00	510	118	51.2	7.45
JUN 21...	1000	31	656	10.0	125	7.8	4400	21.0	18.0	810	180	87.7	19.1
AUG 20...	1130	11	650	9.7	131	8.2	4960	29.5	21.5	730	151	83.8	4.61

DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
NOV 24...	4	196	250	156	.6	12.1	439	1.53	371	1130	3	.08	.8
MAR 07...	6	301	162	112	.7	8.5	865	2.13	1440	1570	786	.11	1.7
JUN 21...	11	713	267	530	1.3	14.4	1320	4.12	253	3030	2	.21	1.1
AUG 20...	14	894	214	734	1.9	16.6	1260	4.46	93.9	3280	3	.57	2.7

DATE	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
NOV 24...	41.0	<.06	242	.06	<.8	.26	2.4	<10	<.08	88.0	7.2	<.23	1.2
MAR 07...	50.5	.11	211	.07	3.8	1.10	4.8	870	1.28	118	66.4	<.23	1.6
JUN 21...	57.1	<.10	791	<.07	E.5	.47	6.1	<30	<.20	241	85.0	<.23	2.5
AUG 20...	139	<.10	1190	.20	<.8	.52	20.4	<30	E.08	403	75.6	<.01	5.5

DATE	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
NOV 24...	1.10	2.0	<1.0	1570	<8.0	3	5.30
MAR 07...	2.67	7.2	<1.0	1590	<30.0	9	5.42
JUN 21...	1.35	2.6	<2.0	3390	<24.0	5	9.34
AUG 20...	<.10	5.5	<2.0	3640	<24.0	15	13.5

E -- Estimated value.

## YELLOWSTONE RIVER BASIN

06313605 POWDER RIVER BELOW BURGER DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°08'50", long 106°08'34", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.8, T.48 N., R.77 W., Johnson County, Hydrologic Unit 10090202, 20 ft downstream of Burger Draw, 0.4 mi downstream of bridge on county road 204, and 24 mi southeast of Buffalo.

PERIOD OF RECORD.--November 2000 to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
NOV 16...	0845	73	661	12.4	99	7.7	2560	-9.0	.00	700	168	68.9	9.79	
JAN 10...	0855	132	--	10.3	--	8.0	1910	-10.0	.00	520	131	48.0	6.93	
MAY 08...	1140	181	663	8.7	101	8.1	1640	25.5	15.5	400	94.5	39.9	6.09	
JUN 06...	1515	63	662	6.4	82	8.1	3180	20.5	20.0	730	168	73.6	12.2	
JUL 12...	1630	1030	660	4.8	66	7.6	2630	29.0	24.0	650	162	59.9	12.4	
AUG 14...	0930	4.2	661	10.3	134	8.1	4850	27.5	20.5	950	199	108	22.9	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
NOV 16...	5	325	169	208	.6	10.5	797	2.55	369	1870	1690	--	--	
JAN 10...	4	219	254	168	.7	10.9	528	1.83	480	1350	1270	--	--	
MAY 08...	4	197	178	119	.6	8.0	493	1.57	563	1150	1070	2	.16	
JUN 06...	7	447	222	216	.8	7.8	1170	3.18	396	2340	2230	3	.30	
JUL 12...	7	382	103	65.2	.7	8.3	1210	2.83	5800	2080	1970	4	.38	
AUG 14...	11	795	399	475	.8	7.6	1670	4.96	41.3	3640	3520	2	.30	
DATE		ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
NOV 16...	<2.0	--	70.1	--	--	--	--	--	--	--	<30	--	--	3.8
JAN 10...	<2.0	--	46.7	--	--	--	--	--	--	--	<10	--	--	3.4
MAY 08...	E1.0	31.8	92.5	<.06	201	E.03	<.8	.22	3.2	<10	E.04	71.6	1.9	
JUN 06...	E1.2	65.2	168	<.10	322	.11	<.8	.42	7.3	<30	<.20	126	4.8	
JUL 12...	<2.0	68.2	642	<.06	264	.04	E.5	.38	6.9	<10	<.08	97.0	.6	
AUG 14...	E1.7	165	196	<.06	536	E.02	<.8	.38	12.6	<30	E.05	229	25.0	
DATE			MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)			
NOV 16...			--	--	--	--	--	--	--	--	--			
JAN 10...			--	--	--	--	--	--	--	--	--			
MAY 08...			2.1	.13	2.3	<1.0	1380	.06	.7	2	5.18			
JUN 06...			3.8	2.65	3.5	<2.0	2450	.23	.9	5	10.1			
JUL 12...			5.1	2.44	9.0	<1.0	2200	E.03	1.1	4	5.38			
AUG 14...			4.8	.51	2.4	<1.0	3180	.40	.8	9	8.10			

E -- Estimated value.



06313700 DEAD HORSE CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°12'54", long 106°06'41", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 15, T.49 N., R.77 W., Johnson County, Hydrologic Unit 10090202, on left bank 250 ft downstream from bridge on dirt road, 0.80 mi upstream from Interstate Highway 90, 5.3 mi upstream from mouth, and 31 mi east of Buffalo.

DRAINAGE AREA.--151 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1958-71, October 1971 to September 1990, April 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,970 ft above sea level, from topographic map. Oct. 1, 1958 to Sept. 30, 1971, crest-stage at site 250 ft upstream at present datum. Nov. 24, 1971 to July 15, 1976, water-stage recorder at site 0.3 mi upstream at different datum. July 16, 1976 to July 18, 1984, at site 250 ft upstream at present datum.

REMARKS.--Records excellent except those for discharges greater than .00 ft<sup>3</sup>/s and those for estimated daily discharges, which are poor. Natural flow of stream affected by numerous small reservoirs and diversions for irrigation and coalbed methane production water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	e.01	e.00	.00	e.40	.00	.00
2	.00	.00	.00	.00	.00	1.4	e.01	e.00	.00	e.00	.00	.00
3	.00	.00	.00	.00	.00	.02	e.01	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	12	e.01	.00	24	.00	.00	.00
5	.00	.00	.00	.00	.70	15	e.02	.00	12	.00	.00	.00
6	.00	.00	.00	.00	.00	3.0	e.02	.00	.31	.00	.00	.00
7	.00	.00	.00	.00	.00	2.7	e.03	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.94	.04	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.30	.02	.00	2.9	68	.00	.00
10	.00	.00	.00	.00	.00	.06	e.00	.00	.31	76	.00	.00
11	.00	.00	.00	.00	.00	.01	e.00	.00	.01	9.9	.00	.00
12	.00	.00	.00	.00	.00	.02	e.02	.00	.00	.30	.00	.00
13	.00	.00	.00	.00	.00	.01	.01	.00	.65	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.01	.00	28	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	e.00	.00	4.2	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	e.00	.00	.25	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	e.00	.00	.05	.00	.00	.00
18	.00	.00	.00	.00	2.3	.00	.00	.00	.02	.00	.00	.00
19	.00	.00	.00	.00	5.4	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	e.00	.00	.00	.00
22	.00	.00	.00	.00	.00	e.00	.00	.00	e.00	.00	.00	.00
23	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	1.7	.00	.00
24	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	131	.00	.00
25	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	13	.00	.00
26	.00	.00	.00	.00	e.00	e.00	.00	.00	e.00	2.5	.00	.00
27	.00	.00	.00	.00	.00	e.00	.00	.00	e.00	.73	.00	.00
28	.00	.00	.00	.00	.00	e.00	e.00	.00	e.00	.16	.00	.00
29	.00	.00	.00	.00	---	e.00	e.00	.00	e.00	.03	.00	.00
30	.00	.00	.00	.00	---	e.00	e.00	.00	e20	.00	.00	.00
31	.00	---	.00	.00	---	e.01	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	8.40	35.47	0.21	0.00	92.70	303.72	0.00	0.00
MEAN	.000	.000	.000	.000	.30	1.14	.007	.000	3.09	9.80	.000	.000
MAX	.00	.00	.00	.00	5.4	15	.04	.00	28	131	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.17	.70	.4	.00	184	602	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2001, BY WATER YEAR (WY)

	MEAN	.11	.044	.016	.10	3.83	2.65	.16	4.92	5.43	4.58	2.05	1.00
MAX	1.11	.28	.12	1.81	58.3	44.4	2.13	71.3	32.4	29.1	12.6	13.4	
(WY)	1981	1985	1983	1983	1972	1978	1973	1978	1979	1982	1990	1986	
MIN	.000	.000	.000	.000	.000	.000	.005	.000	.000	.000	.000	.000	
(WY)	1972	1973	1973	1972	1973	1976	1972	2001	1990	1976	1989	1972	

## YELLOWSTONE RIVER BASIN

06313700 DEAD HORSE CREEK NEAR BUFFALO, WY--Continued

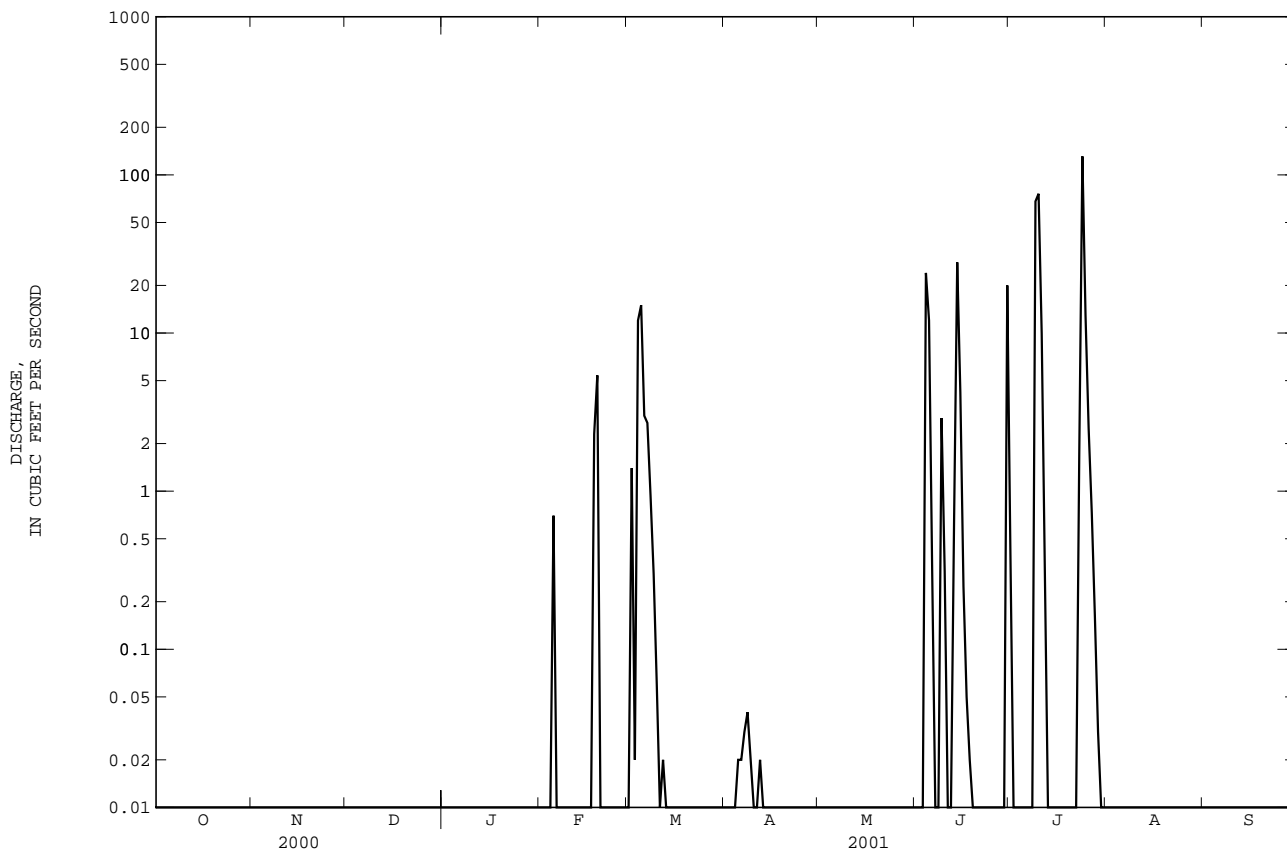
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*		FOR 2001 WATER YEAR		WATER YEARS 1972 - 2001	
ANNUAL TOTAL	--		440.50		--	
ANNUAL MEAN	--		1.21		2.03	
HIGHEST ANNUAL MEAN	--		--		10.6	1978
LOWEST ANNUAL MEAN	--		--		.027	1988
HIGHEST DAILY MEAN	82	May 17	131	Jul 24	819	May 18 1978
LOWEST DAILY MEAN	.00	Many days	.00	Many days	.00	Many days, most years
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 8	.00	Oct 1	.00	Most years
MAXIMUM PEAK FLOW	390	May 16	373	Jul 24	3460 <sup>a</sup>	Sep 18 1986
MAXIMUM PEAK STAGE	9.45	May 16	10.92	Jul 24	10.95 <sup>b</sup>	Sep 18 1986
ANNUAL RUNOFF (AC-FT)	--		874		1470	
10 PERCENT EXCEEDS	--		--		--	
50 PERCENT EXCEEDS	--		--		--	
90 PERCENT EXCEEDS	--		--		--	

\* For period of operation.

a From rating curve extended above 640 ft<sup>3</sup>/s on basis of contracted opening and flow-over-road measurement of peak flow.

b From floodmarks.

e Estimated.



06313700 DEAD HORSE CREEK NEAR BUFFALO, WY--Continued

## WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1987-1989, April 2000 to current year.

REMARKS.--No flow observed on August 14 and September 11.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED CENT (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS-SOLVED CENT (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
JUN 06...	1650	.03	--	--	--	7.6	2420	24.5	26.0	1400	405	88.6	12.7
JUL 12...	1450	.03	664	7.4	115	7.8	1220	28.0	31.0	500	159	25.5	10.4
AUG 14...	1030	.00	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	1605	.00	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM AD-SORP- TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
JUN 06...	1.0	83.2	83	4.1	.5	7.9	1420	3.16	.19	2320	2070	<2.0	119
JUL 12...	.9	45.8	75	4.4	.4	6.7	563	1.33	.08	976	860	<2.0	59.9
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
JUN 06...	<30	153
JUL 12...	<10	34.0
AUG 14...	--	--
SEP 11...	--	--

## YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY

LOCATION.--Lat 44°29'28", long 106°10'38", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.7, T.52 N., R.77 W., Johnson County, Hydrologic Unit 10090205, on left bank 1.1 mi upstream from Jewell Draw, 5.0 mi upstream from mouth, and 11 mi south of Arvada.

DRAINAGE AREA.--945 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1963 to September 1970, October 1977 to September 1981, October 2000 to September 2001.

GAGE.--Water-stage recorder. Elevation of gage is 3,765 ft, from topographic map.

REMARKS.--Records fair except those for Oct. 1 to Nov. 8 and those for estimated daily discharges, which are poor. Diversions for irrigation of about 12,000 acres above station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	12	e15	e19	e15	e14	17	26	15	e20	1.4	.08
2	6.4	12	e16	e23	e16	e16	16	28	9.0	e10	1.1	.08
3	6.3	13	e16	e26	e17	e15	14	24	7.0	e4.0	.94	.08
4	6.2	13	e15	e22	e17	e14	14	18	7.0	e2.3	.79	.08
5	6.4	12	e14	e19	e15	e19	14	16	7.0	e1.3	.73	.08
6	6.5	8.8	e13	e17	e13	e22	14	15	7.0	e.80	.55	.08
7	6.1	5.1	e16	e15	e11	e29	13	12	8.5	e.80	.42	.08
8	e4.7	6.0	e18	e14	e8.8	e42	13	9.7	12	e28	.30	.08
9	4.4	e4.7	e17	e14	e7.6	e55	12	8.2	11	e170	.23	.05
10	4.2	e3.8	e12	e15	e8.0	e35	12	8.9	e8.0	e800	.20	.04
11	3.9	e3.0	e8.2	e17	e8.8	e30	12	8.2	e5.6	e600	.16	.04
12	3.8	e3.3	e10	e16	e8.2	e41	11	8.1	e5.0	e230	.13	.04
13	4.7	e3.6	e15	e15	e8.8	e54	10	8.1	e9.0	e140	.12	.04
14	5.5	e4.3	e19	e17	e8.2	55	9.9	8.8	e5.0	e90	.12	.04
15	6.4	e5.4	e20	e16	e8.8	49	10	7.2	e5.4	e50	.12	.07
16	7.0	e6.9	e15	e14	e10	55	10	6.5	e4.8	e32	.12	.08
17	8.1	e8.4	e16	e15	e13	61	10	5.7	e4.0	e23	.12	.08
18	9.5	e12	e15	e15	e16	48	9.2	4.7	e3.6	e17	.12	.07
19	10	e11	e17	e16	e18	50	8.7	4.0	e3.4	e14	.12	.04
20	11	e14	e15	e18	e17	52	9.8	3.9	e3.2	e8.0	.12	.04
21	11	e16	e13	e20	e17	54	11	4.2	e3.0	e4.0	.12	.04
22	11	e17	e17	e18	e14	53	11	3.4	e2.6	e20	.12	.05
23	11	e17	e16	e16	e15	49	12	3.1	e2.2	e6.0	.12	.08
24	12	e16	e15	e18	e13	37	16	3.8	e2.0	e5.0	.12	.08
25	11	e15	e16	e19	e12	41	13	3.2	e1.9	e4.3	.12	.08
26	12	e13	e20	e17	e11	30	11	2.9	e1.7	e3.7	.12	.08
27	12	e11	e23	e16	e10	29	11	3.2	e1.5	e3.2	.12	.07
28	12	e13	e21	e19	e12	28	10	2.9	e1.1	2.6	.10	.04
29	12	e12	e18	e17	---	26	11	2.7	e11	2.2	.08	.04
30	12	e13	e19	e15	---	20	29	2.4	e30	1.8	.08	.07
31	11	---	e21	e14	---	18	---	2.8	---	1.6	.08	---
TOTAL	254.2	305.3	501.2	532	349.2	1141	374.6	265.6	197.5	2295.60	9.09	1.90
MEAN	8.20	10.2	16.2	17.2	12.5	36.8	12.5	8.57	6.58	74.1	.29	.063
MAX	12	17	23	26	18	61	29	28	30	800	1.4	.08
MIN	3.8	3.0	8.2	14	7.6	14	8.7	2.4	1.1	.80	.08	.04
AC-FT	504	606	994	1060	693	2260	743	527	392	4550	18	3.8

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2001, BY WATER YEAR (WY)

	MEAN	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
MEAN	17.4	19.5	17.6	14.4	18.6	47.2	33.3	111	217	59.9	17.1	13.9
MAX	39.5	42.1	39.7	26.3	41.3	101	71.6	629	590	183	68.6	54.9
(WY)	1969	1979	1979	1980	1968	1978	1980	1978	1967	1967	1968	1968
MIN	.68	6.43	8.83	4.14	7.55	11.5	7.29	8.57	3.26	.13	.000	.063
(WY)	1967	1967	1967	1970	1966	1981	1967	2001	1966	1966	1966	2001

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR

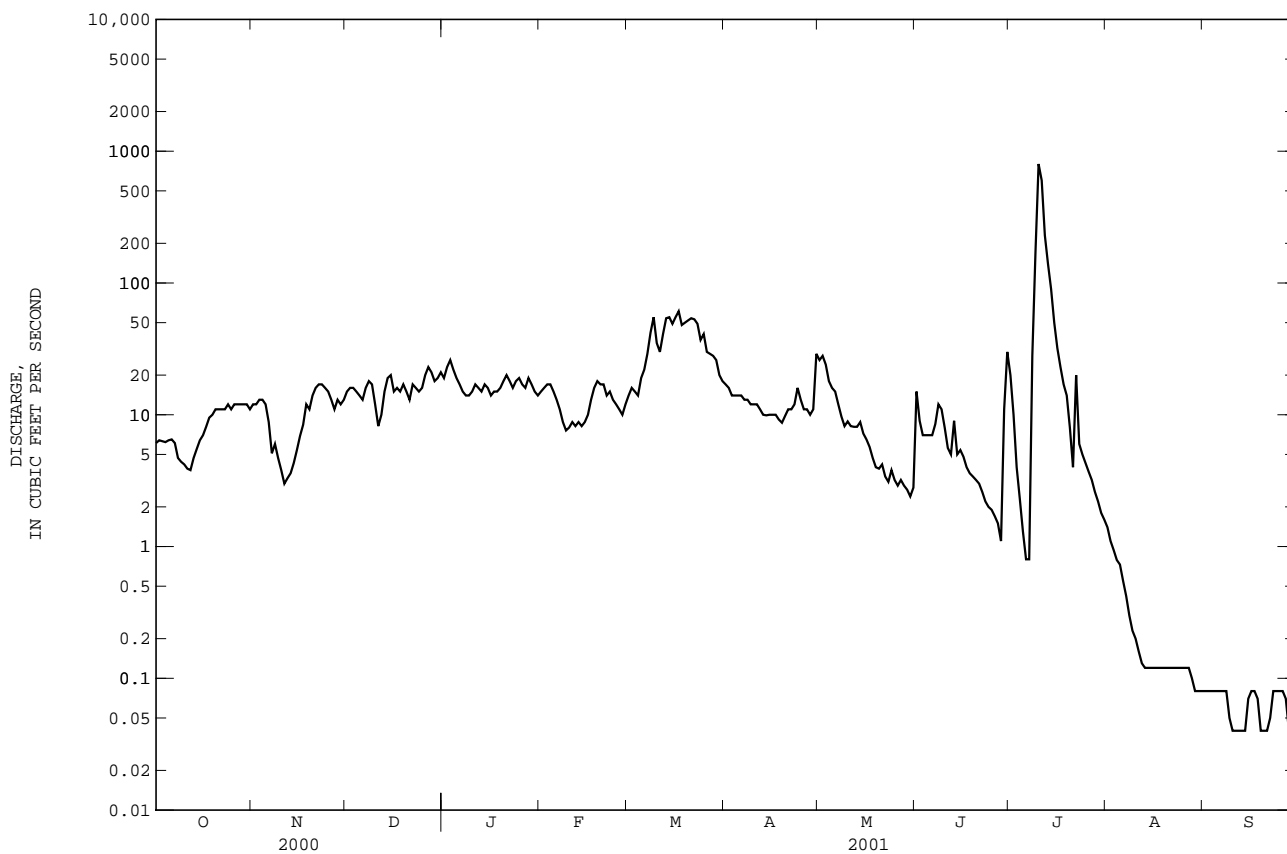
WATER YEARS 1963 - 2001

ANNUAL TOTAL	6227.19	--	
ANNUAL MEAN	17.1	47.4	
HIGHEST ANNUAL MEAN	--	119	1978
LOWEST ANNUAL MEAN	--	14.5	1966
HIGHEST DAILY MEAN	800	Jul 10	2030 May 20 1978
LOWEST DAILY MEAN	.04	Several days	.00 Several days, some years
ANNUAL SEVEN-DAY MINIMUM	.05	Sep 9	.00 Some years
MAXIMUM PEAK FLOW	1530	Jul 10	15800 <sup>a</sup> Jun 15 1965
MAXIMUM PEAK STAGE	8.10 <sup>b</sup>	Jul 10	16.02 <sup>b</sup> Jun 15 1965
ANNUAL RUNOFF (AC-FT)	12350		34370
10 PERCENT EXCEEDS	26		103
50 PERCENT EXCEEDS	11		17
90 PERCENT EXCEEDS	.12		2.6

a From rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.



06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--continued

## WATER QUALITY RECORDS.

PERIOD OF RECORD.--Water years 1967 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July to September 2001 (seasonal).

WATER TEMPERATURE: July to September 2001 (seasonal).

INSTRUMENTATION.--Water quality monitor for specific conductance and water temperature.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,280 microsiemens/cm, September 4-7, 2001; minimum daily, 2810 microsiemens/cm, August 6-8, 2001.

WATER TEMPERATURE: Maximum, 31.4°C, August 6, 2001; minimum, 10.4°C, September 9, 2001.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,280 microsiemens/cm, September 4-7; minimum daily, 2810 microsiemens/cm, August 6-8.

WATER TEMPERATURE: Maximum, 31.4°C, August 6; minimum, 10.4°C, September 9.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
MAR 28...	1430	24	659	11.8	104	8.0	1460	11.0	4.0	590	127	66.0	3.16	
MAY 09...	1320	8.0	662	9.7	121	8.2	1760	26.5	18.5	730	144	88.9	5.76	
JUN 07...	1500	8.7	668	8.7	113	8.1	2820	26.5	21.5	1200	223	153	7.27	
JUL 12...	1855	232	660	5.4	72	7.5	684	28.0	21.5	290	78.5	23.8	6.98	
AUG 14...	1145	.12	666	9.6	130	7.7	2850	30.0	23.0	1200	262	120	10.5	
SEP 11...	1430	.05	--	--	--	8.0	3140	23.0	21.5	1200	280	128	10.2	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAR 28...	2	102	187	6.8	.2	6.4	627	1.57	75.4	1160	1050	<.041	E.041	
MAY 09...	2	139	222	8.6	.3	4.7	772	1.98	31.5	1460	1300	<.041	E.024	
JUN 07...	3	241	228	15.7	.3	3.9	1460	3.33	57.6	2450	2240	<.040	<.050	
JUL 12...	.5	17.9	72	1.7	.3	4.9	265	.67	309	493	443	--	--	
AUG 14...	3	267	249	11.8	.4	5.3	1480	3.44	.82	2530	2320	--	--	
SEP 11...	4	326	263	12.5	.3	5.8	1630	3.69	.37	2710	2560	--	--	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
MAR 28...	<.006	<.018	--	--	<2.0	--	34.7	--	--	--	--	--	--	--
MAY 09...	E.004	<.018	<1	.17	E1.0	41.0	44.6	<.06	166	.06	<.8	.68	4.2	
JUN 07...	<.006	<.020	3	.34	E1.1	52.9	54.8	<.10	290	<.07	<.8	.78	9.0	
JUL 12...	--	--	4	.27	<2.0	46.1	696	<.06	53	<.04	<.8	.39	2.1	
AUG 14...	--	--	4	.66	E1.5	98.1	107	<.10	325	E.04	<.8	3.05	22.3	
SEP 11...	--	--	<2	.19	E1.4	97.5	94.8	<.10	135	<.07	<.8	1.52	13.5	

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
MAR 28...	<10	--	--	94.6	--	--	--	--	--	--	--	--	--
MAY 09...	10	<.08	47.4	113	2.5	1.20	1.2	<1.0	1440	<.04	.9	3	12.9
JUN 07...	<30	<.20	65.5	71.6	4.2	3.83	1.8	<2.0	2250	<.08	1.6	8	18.3
JUL 12...	<10	<.08	11.0	8.2	2.3	2.32	1.9	<1.0	433	<.04	1.1	1	3.38
AUG 14...	<30	<.20	106	1460	12.1	.84	1.7	<2.0	4510	<.08	.8	15	23.6
SEP 11...	<30	<.20	56.9	951	5.6	<.30	1.0	<2.0	2670	<.08	.4	8	12.1

DATE	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
MAR 28...	108	7.0
MAY 09...	123	2.7
JUN 07...	16	.38
JUL 12...	--	--
AUG 14...	--	--
SEP 11...	--	--

E -- Estimated value.

## YELLOWSTONE RIVER BASIN

06316400 CRAZY WOMAN CREEK AT UPPER STATION, NEAR ARVADA, WY--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	2880	2850	2860	3190	3010	3120
2	---	---	---	---	---	---	2870	2840	2850	3280	3130	3210
3	---	---	---	---	---	---	2850	2820	2840	3280	3210	3270
4	---	---	---	---	---	---	2840	2820	2820	3280	3280	3280
5	---	---	---	---	---	---	2830	2810	2820	3280	3280	3280
6	---	---	---	---	---	---	2830	2800	2810	3280	3280	3280
7	---	---	---	---	---	---	2820	2800	2810	3280	3280	3280
8	---	---	---	---	---	---	2820	2800	2810	3280	3110	3230
9	---	---	---	---	---	---	2830	2810	2820	3160	3090	3120
10	---	---	---	---	---	---	2850	2820	2830	3140	3020	3070
11	---	---	---	---	---	---	2860	2830	2840	---	---	---
12	---	---	---	---	---	---	2870	2850	2860	---	---	---
13	---	---	---	---	---	---	2880	2860	2870	---	---	---
14	---	---	---	---	---	---	3010	2870	2920	---	---	---
15	---	---	---	---	---	---	3120	3000	3060	---	---	---
16	---	---	---	---	---	---	3140	3070	3100	---	---	---
17	---	---	---	---	---	---	3170	3100	3130	---	---	---
18	---	---	---	---	---	---	3150	3000	3100	---	---	---
19	---	---	---	---	---	---	3140	3050	3080	---	---	---
20	---	---	---	---	---	---	3110	3030	3070	---	---	---
21	---	---	---	---	---	---	3070	2900	3020	---	---	---
22	---	---	---	---	---	---	3010	2920	2950	---	---	---
23	---	---	---	---	---	---	3040	2970	3000	---	---	---
24	---	---	---	---	---	---	3070	2950	3010	---	---	---
25	---	---	---	---	---	---	3060	2930	3000	---	---	---
26	---	---	---	---	---	---	3040	2890	2950	---	---	---
27	---	---	---	---	---	---	3020	2860	2940	---	---	---
28	---	---	---	2880	2850	2860	3010	2860	2950	---	---	---
29	---	---	---	2890	2860	2870	3070	2920	3010	---	---	---
30	---	---	---	2890	2860	2870	3100	3010	3060	---	---	---
31	---	---	---	2890	2860	2870	3160	3030	3090	---	---	---
MONTH	---	---	---	2890	2850	2870	3170	2800	2940	3280	3010	3210
YEAR	3280	2800	3000									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible]



06317000 POWDER RIVER AT ARVADA, WY

LOCATION.--Lat 44°39'00", long 106°07'37", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.16, T.54 N., R.77 W., Sheridan County, Hydrologic Unit 10090202, on right bank 0.1 mi downstream from bridge on county road, 0.2 mi southeast of Arvada, and 0.2 mi upstream from Wild Horse Creek.

DRAINAGE AREA.--6,050 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1919 to current year (no winter records in water years 1919-30, 1934). Records for Feb. 16-23, 1930, published in WSP 701, are unreliable and should not be used.

REVISED RECORDS.--WSP 1509: 1921(M), 1923(M), 1924-26, 1927-28(M), 1929, 1930(M), 1931, 1932(M), 1933, 1934(M), 1935-36. See PERIOD OF RECORD.

GAGE.--Water-stage recorder. Elevation of gage is 3,620 ft above sea level, from topographic map. Prior to Oct. 24, 1938, non-contributing gage at bridge 0.2 mi upstream at datum 3,621.87 ft. Oct. 24, 1938 to Apr. 27, 1983, at site 0.7 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Numerous small reservoirs and diversions for irrigation of about 29,000 acres upstream from station. Data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	144	e120	e120	e110	e110	187	189	49	16	20	.00
2	64	142	e130	e110	e120	e120	182	204	201	50	e14	.00
3	66	139	e130	e130	e130	e150	194	248	175	38	e10	.00
4	65	e130	e120	e140	e130	e170	206	274	140	17	e9.0	.00
5	64	e100	e120	e130	e110	e190	224	275	126	4.5	e8.0	.00
6	67	e80	e130	e120	e100	e220	248	255	115	e4.0	e7.0	.00
7	72	e80	e120	e120	e80	e250	266	243	90	e4.0	e6.0	.00
8	74	e90	e120	e130	e70	e320	255	215	77	e3.0	e.41	.00
9	78	e70	e100	e120	e80	e400	257	186	85	e3.0	.05	.00
10	85	e60	e80	e130	e90	e600	243	177	95	e85	.02	.00
11	89	e50	e60	e130	e80	e800	208	166	76	286	.01	.00
12	91	e56	e80	e120	e90	e1200	181	147	52	1740	.00	.00
13	92	e60	e110	e110	e76	e660	166	131	53	1120	.00	.00
14	99	e60	e120	e100	e82	e600	166	125	50	650	.00	.00
15	100	e60	e130	e100	e74	e800	163	129	81	630	.00	.00
16	100	e62	e100	e100	e66	e1000	156	119	50	528	.00	.00
17	100	e64	e110	e100	e80	747	152	108	51	275	.00	.00
18	100	e80	e100	e110	e110	e500	151	101	42	220	.00	.00
19	101	e70	e110	e120	e130	e400	147	96	36	163	.00	.00
20	103	e80	e100	e110	e120	e450	149	95	33	137	.00	.00
21	106	e94	e80	e120	e120	e320	166	98	32	116	.00	.00
22	106	e100	e92	e120	e110	e350	171	94	29	100	.00	.00
23	108	e100	e86	e110	e110	e340	173	88	26	88	.00	.00
24	108	e110	e80	e120	e100	e300	178	80	22	289	.00	.00
25	112	e110	e92	e130	e110	e240	185	79	16	256	.00	.00
26	115	e110	e100	e120	e110	e250	198	79	11	124	.00	.00
27	119	e110	e120	e120	e120	e280	197	74	7.2	83	.00	.00
28	124	e110	e130	e130	e110	250	175	69	6.4	59	.00	.00
29	126	e120	e120	e130	---	216	163	67	5.5	46	.00	.00
30	127	e110	e110	e110	---	203	162	64	4.7	36	.00	.00
31	131	---	e120	e110	---	195	---	56	---	28	.00	---
TOTAL	2953	2751	3320	3670	2818	12631	5669	4331	1836.8	7198.5	74.49	0.00
MEAN	95.3	91.7	107	118	101	407	189	140	61.2	232	2.40	.000
MAX	131	144	130	140	130	1200	266	275	201	1740	20	.00
MIN	61	50	60	100	66	110	147	56	4.7	3.0	.00	.00
AC-FT	5860	5460	6590	7280	5590	25050	11240	8590	3640	14280	148	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2001, BY WATER YEAR (WY)

	MEAN	137	129	100	90.8	170	394	357	737	752	261	96.5	75.4
MAX	865	419	290	242	567	953	1107	4025	3319	1703	861	451	
(WY)	1995	1999	1974	1974	1972	1978	1941	1978	1962	1937	1941	1982	
MIN	.000	11.4	23.0	15.0	10.0	144	99.0	51.3	30.6	15.8	.000	.000	
(WY)	1961	1936	1950	1933	1933	1961	1961	1936	1954	1974	1932	1932	

## YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1931 - 2001	
ANNUAL TOTAL	58794.55		47252.79		--	
ANNUAL MEAN	161		129		277	
HIGHEST ANNUAL MEAN	--		--		735	
LOWEST ANNUAL MEAN	--		--		70.3	
HIGHEST DAILY MEAN	4160	May 19	1740	Jul 12	22600	May 20 1978
LOWEST DAILY MEAN	.00	Aug 18	.00	Many days	.00	Many days,
						some years
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 18	.00	Aug 12	.00	Many days,
						some years
MAXIMUM PEAK FLOW	--		2640 <sup>a</sup>	Jul 12	100000 <sup>b</sup>	Sep 29 1923
MAXIMUM PEAK STAGE	--		5.01 <sup>c</sup>	Mar 15	23.70 <sup>d</sup>	Sep 29 1923
ANNUAL RUNOFF (AC-FT)	116600		93730		200400	
10 PERCENT EXCEEDS	281		249		595	
50 PERCENT EXCEEDS	130		100		130	
90 PERCENT EXCEEDS	.00		.00		15	

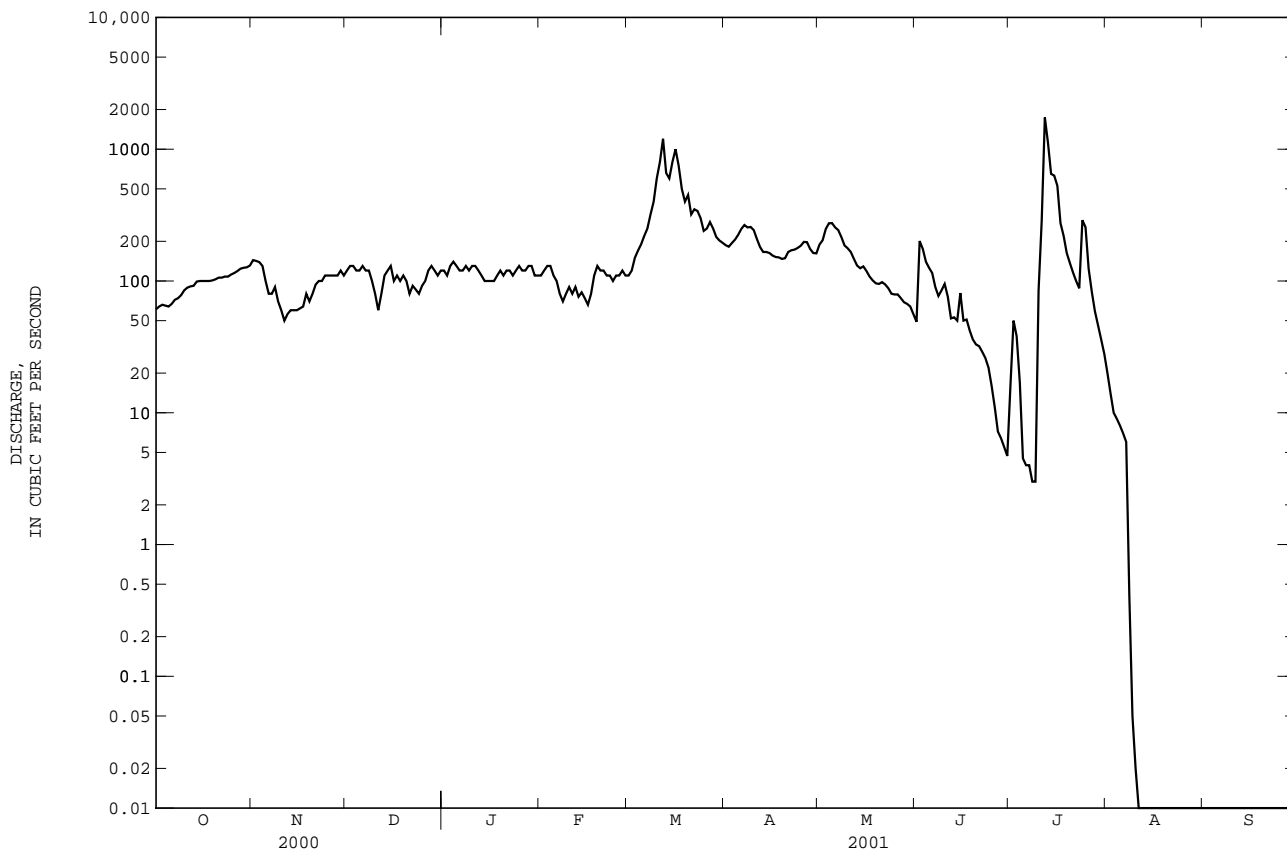
a Gage height, 4.55 ft.

b About, from rating curve extended above 20,000 ft<sup>3</sup>/s.

c Backwater from ice.

d From floodmarks, site and datum then in use.

e Estimated.



WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1949 to September 1957, October 1967 to September 1978.

SUSPENDED-SEDIMENT DISCHARGE: April 1946 to September 1957, October 1967 to September 1971, January 1975 to September 1978, April 1983 to September 1984.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

[illegible][illegible]

## YELLOWSTONE RIVER BASIN

06317000 POWDER RIVER AT ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 24...	<2.0	--	59.7	--	--	--	--	--	--	<30	--	--	17.1
NOV 16...	E1.1	--	90.0	--	--	--	--	--	--	<30	--	--	E2.7
DEC 13...	<2.0	--	41.7	--	--	--	--	--	--	<30	--	--	E5.2
JAN 11...	<2.0	--	63.8	--	--	--	--	--	--	<30	--	--	E4.3
FEB 14...	<2.0	--	40.3	--	--	--	--	--	--	<30	--	--	E4.8
MAR 13...	<2.0	--	307	--	--	--	--	--	--	<10	--	--	14.0
APR 11...	E1.5	--	257	--	--	--	--	--	--	1600	--	--	64.0
MAY 09...	<2.0	24.4	118	<.06	190	.05	<.8	.20	3.1	<10	<.08	63.5	1.5
JUN 07...	<2.0	43.3	204	<.06	212	.45	<.8	.36	7.1	<30	.12	77.7	2.8
JUL 12...	<2.0	45.4	723	<.06	230	E.04	E.4	.41	4.5	<10	<.08	66.1	2.6
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 24...	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--
MAY 09...	3.0	.10	1.9	<1.0	1250	.04	.7	4	5.94
JUN 07...	3.8	2.26	4.0	<1.0	2110	E.03	1.4	7	8.18
JUL 12...	5.2	2.09	5.7	<1.0	1700	E.03	.9	3	7.21
AUG 14...	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--

E -- Estimated value.

## 06317020 WILD HORSE CREEK NEAR ARVADA, WY

LOCATION.--Lat 44° 37' 57", long 106° 01' 53", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 29, T.54 N., R. 76 W., Sheridan County, Hydrologic Unit 10090202, on left bank 0.2 ft upstream from county culvert, 0.4 mi upstream from Middle Prong Wildhorse Creek, and 5.0 mi southeast of Arvada.

DRAINAGE AREA.--250 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 3,730 ft above sea level, from topographic map.

REMARKS.--Records excellent except those for daily discharges greater than .00 ft<sup>3</sup>/s, which are fair. Natural flow of stream affected by numerous small reservoirs and coalbed methane production water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.01	.00	.44	.06	.00	.00	.00	.00
2	.00	.00	.00	.00	.01	.01	.19	.06	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.62	.14	.07	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	1.8	.13	.08	.02	.00	.00	.00
5	.00	.00	.00	.00	.00	1.0	.15	.08	.01	.00	.00	.00
6	.00	.00	.00	.00	.00	.97	.15	.08	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	1.0	.14	.06	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	1.1	.13	.04	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.81	.11	.04	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.58	.10	.04	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.49	.09	.03	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.55	.08	.03	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.55	.07	.02	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.49	.07	.02	.00	.00	.00	.00
15	.00	.00	.00	.07	.00	.45	.07	.02	.01	.00	.00	.00
16	.00	.00	.00	.13	.00	.43	.06	.02	.00	.00	.00	.00
17	.00	.00	.00	.23	.00	.44	.06	.01	.00	.00	.00	.00
18	.00	.00	.00	.02	.00	.47	.05	.01	.00	.00	.00	.00
19	.00	.00	.00	.06	.00	.45	.05	.01	.00	.00	.00	.00
20	.00	.00	.00	.04	.00	.45	.07	.01	.00	.00	.00	.00
21	.00	.00	.00	.05	.00	.45	.18	.01	.00	.00	.00	.00
22	.00	.00	.00	.02	.00	.47	.20	.01	.00	.00	.00	.00
23	.00	.00	.00	.05	.00	.47	.16	.00	.00	.00	.00	.00
24	.00	.00	.00	.01	.00	.45	.12	.00	.00	.00	.00	.00
25	.00	.00	.00	.01	.00	.43	.09	.00	.00	.00	.00	.00
26	.00	.00	.00	.01	.00	.43	.09	.00	.00	.00	.00	.00
27	.00	.00	.00	.01	.00	.45	.08	.00	.00	.00	.00	.00
28	.00	.00	.00	.02	.00	.46	.07	.00	.00	.00	.00	.00
29	.00	.00	.00	.02	---	.45	.07	.00	.00	.00	.00	.00
30	.00	.00	.00	.01	---	.45	.06	.00	.00	.00	.00	.00
31	.00	---	.00	.01	---	.45	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.77	0.02	17.62	3.47	0.81	0.04	0.00	0.00	0.00
MEAN	.000	.000	.000	.025	.001	.57	.12	.026	.001	.000	.000	.000
MAX	.00	.00	.00	.23	.01	1.8	.44	.08	.02	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	1.5	.04	35	6.9	1.6	.08	.00	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

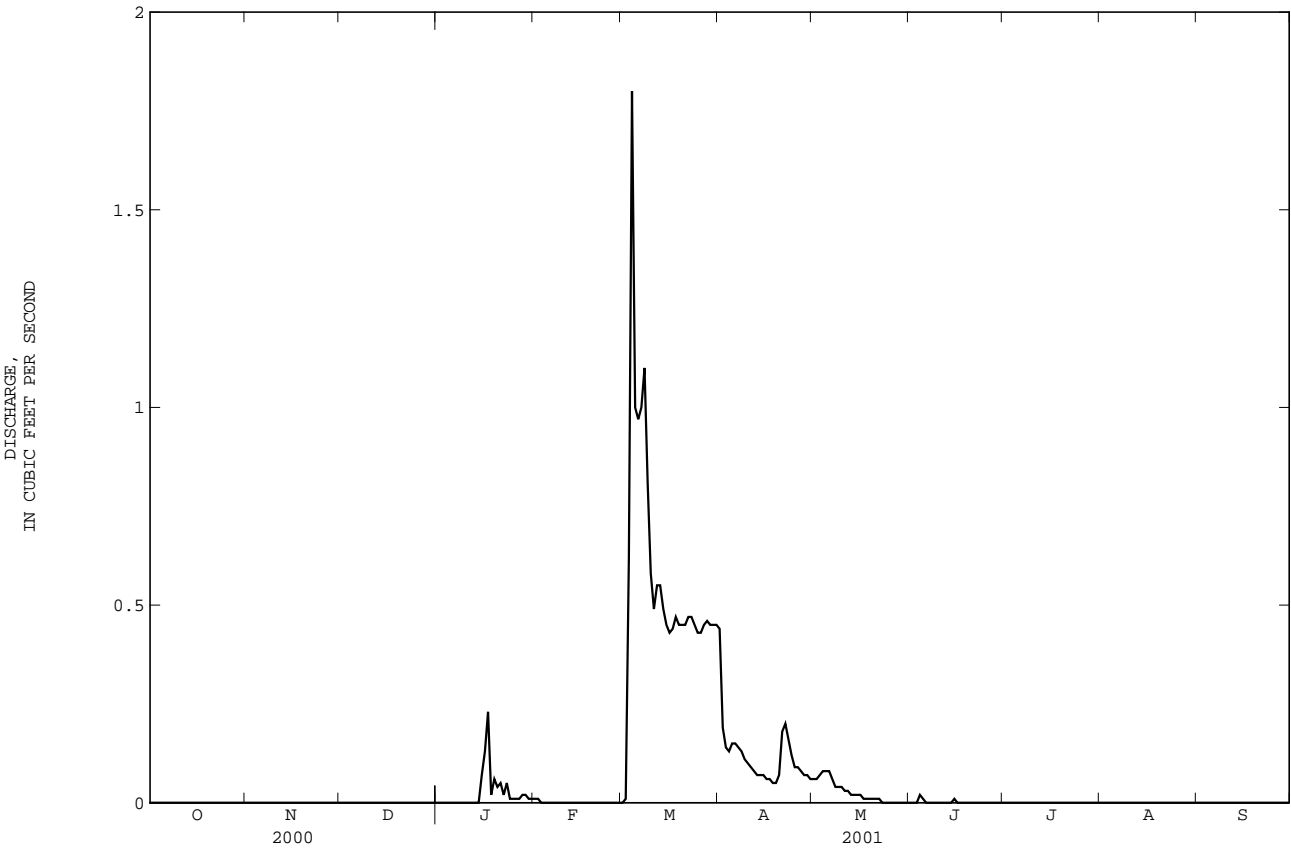
	2000	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000
MEAN	.000	.000	.000	.025	.001	.57	.12	.026	.001	.000	.000	.000
MAX	.000	.000	.000	.025	.001	.57	.12	.026	.001	.000	.000	.000
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000
MIN	.000	.000	.000	.025	.001	.57	.12	.026	.000	.000	.000	.000
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2000	2000	2000	2000

YELLOWSTONE RIVER BASIN

06317020 WILDHORSE CREEK NEAR ARVADA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*	FOR 2001 WATER YEAR	WATER YEARS 2000 - 2001
ANNUAL TOTAL	--	22.73	--
ANNUAL MEAN	--	.062	.062
HIGHEST ANNUAL MEAN	--	--	.062 2001
LOWEST ANNUAL MEAN	--	--	.062 2001
HIGHEST DAILY MEAN	--	1.8 Mar 4	1.8 Mar 4 2001
LOWEST DAILY MEAN	.00 Many days	.00 Many days	.00 Many days, most years
ANNUAL SEVEN-DAY MINIMUM	.00 Many days	.00 Many days	.00 Most years
MAXIMUM PEAK FLOW	--	2.3 Mar 4	2.3 Mar 4 2001
MAXIMUM PEAK STAGE	--	1.90 Mar 4	1.90 Mar 4 2001
ANNUAL RUNOFF (AC-FT)	--	45	45
10 PERCENT EXCEEDS	--	.15	.08
50 PERCENT EXCEEDS	--	.00	.00
90 PERCENT EXCEEDS	--	.00	.00

\* For period of operation.



06317020 WILD HORSE CREEK NEAR ARVADA, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2000 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
MAR 13...	1530	.53	660	9.2	79	7.7	1520	13.0	3.0	290	45.3	43.5	6.23
MAY 09...	1015	.03	665	5.6	64	7.9	4580	22.0	14.5	1200	165	189	15.5
JUN 07...	1130	.00	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	1345	.00	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	1315	.00	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM AD-SORP- TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)
MAR 13...	6	241	333	7.8	.4	4.7	483	1.48	1.56	1090	1030	E1.2	44.4
MAY 09...	10	808	796	22.1	.6	.8	2100	5.36	.32	3940	3780	E1.5	50.8
JUN 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
MAR 13...	50	180
MAY 09...	50	424
JUN 07...	--	--
AUG 14...	--	--
SEP 11...	--	--

E -- Estimated value.

## YELLOWSTONE RIVER BASIN

06320000 ROCK CREEK NEAR BUFFALO, WY

LOCATION.--Lat 44°27'22", long 106°52'42", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.29, T.52 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on left bank 300 ft downstream from confluence of North and South Forks and 11.5 mi northwest of Buffalo.

DRAINAGE AREA.--60.0 mi<sup>2</sup>.

PERIOD OF RECORD.--April to August 1941, April to December 1942, May 1943 to November 1944, April 1945 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1309.

GAGE.--Water-stage recorder. Elevation of gage is 5,280 ft above sea level, from topographic map. Prior to Jan. 8, 1944, nonrecording gages 600 ft upstream on North and South Forks at different datums, Jan. 8, 1944, to Sept. 30, 1952, water-stage recorder at present site at datum 0.72 ft lower.

REMARKS.--Records good. Water is imported into drainage basin upstream from station from South Piney Creek. Diversions for irrigation of about 250 acres upstream from station. Data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 4 . . . 17.4

COOPERATION.--Station operated and recorded provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	3.3	27	27	13	37	11
2	---	---	---	---	---	---	3.4	12	28	12	35	9.5
3	---	---	---	---	---	---	3.4	7.4	37	11	26	9.2
4	---	---	---	---	---	---	3.5	5.8	36	15	26	9.0
5	---	---	---	---	---	---	3.5	7.4	30	16	26	8.7
6	---	---	---	---	---	---	4.1	8.5	27	19	26	10
7	---	---	---	---	---	---	4.3	7.0	24	19	26	14
8	---	---	---	---	---	---	4.2	7.2	26	18	21	16
9	---	---	---	---	---	---	4.0	17	27	19	12	14
10	---	---	---	---	---	---	3.5	23	28	39	14	14
11	---	---	---	---	---	---	3.4	18	27	40	13	13
12	---	---	---	---	---	---	3.4	26	24	38	10	12
13	---	---	---	---	---	---	3.4	46	33	50	9.2	12
14	---	---	---	---	---	---	3.4	62	30	46	9.0	9.0
15	---	---	---	---	---	---	3.5	53	27	47	8.5	10
16	---	---	---	---	---	---	3.3	46	23	46	9.2	9.7
17	---	---	---	---	---	---	3.4	28	20	45	15	10
18	---	---	---	---	---	---	4.7	22	21	44	15	8.4
19	---	---	---	---	---	---	7.2	28	19	44	14	6.8
20	---	---	---	---	---	---	9.0	32	19	42	14	6.6
21	---	---	---	---	---	---	6.2	24	18	41	15	7.4
22	---	---	---	---	---	---	5.0	17	17	40	15	7.6
23	---	---	---	---	---	---	4.6	19	18	39	16	7.6
24	---	---	---	---	---	---	4.7	18	18	42	20	7.2
25	---	---	---	---	---	---	7.2	24	19	35	20	4.9
26	---	---	---	---	---	---	12	28	19	35	20	4.7
27	---	---	---	---	---	---	16	34	21	38	19	4.6
28	---	---	---	---	---	---	25	31	23	37	18	4.6
29	---	---	---	---	---	---	39	32	18	37	18	5.0
30	---	---	---	---	---	---	29	30	14	37	18	5.0
31	---	---	---	---	---	---	---	24	---	37	18	---
TOTAL	---	---	---	---	---	---	230.6	764.3	718	1041	562.9	271.5
MEAN	---	---	---	---	---	---	7.69	24.7	23.9	33.6	18.2	9.05
MAX	---	---	---	---	---	---	39	62	37	50	37	16
MIN	---	---	---	---	---	---	3.3	5.8	14	11	8.5	4.6
AC-FT	---	---	---	---	---	---	457	1520	1420	2060	1120	539

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2001, BY WATER YEAR (WY)\*

	MEAN	9.23	7.11	5.57	4.58	4.43	4.81	15.4	100	146	61.1	40.6	20.2
MAX	20.1	12.7	8.75	6.40	6.57	7.13	46.7	256	352	142	69.2	57.3	
(WY)	1969	1969	1969	1965	1969	1960	1994	1978	1995	1975	1968	1982	
MIN	3.44	2.74	3.08	1.88	2.27	2.22	4.63	24.7	23.9	28.3	4.22	1.57	
(WY)	1955	1955	1967	1950	1957	1966	1966	2001	2001	1958	1954	1954	



06320000 ROCK CREEK NEAR BUFFALO, WY--Continued

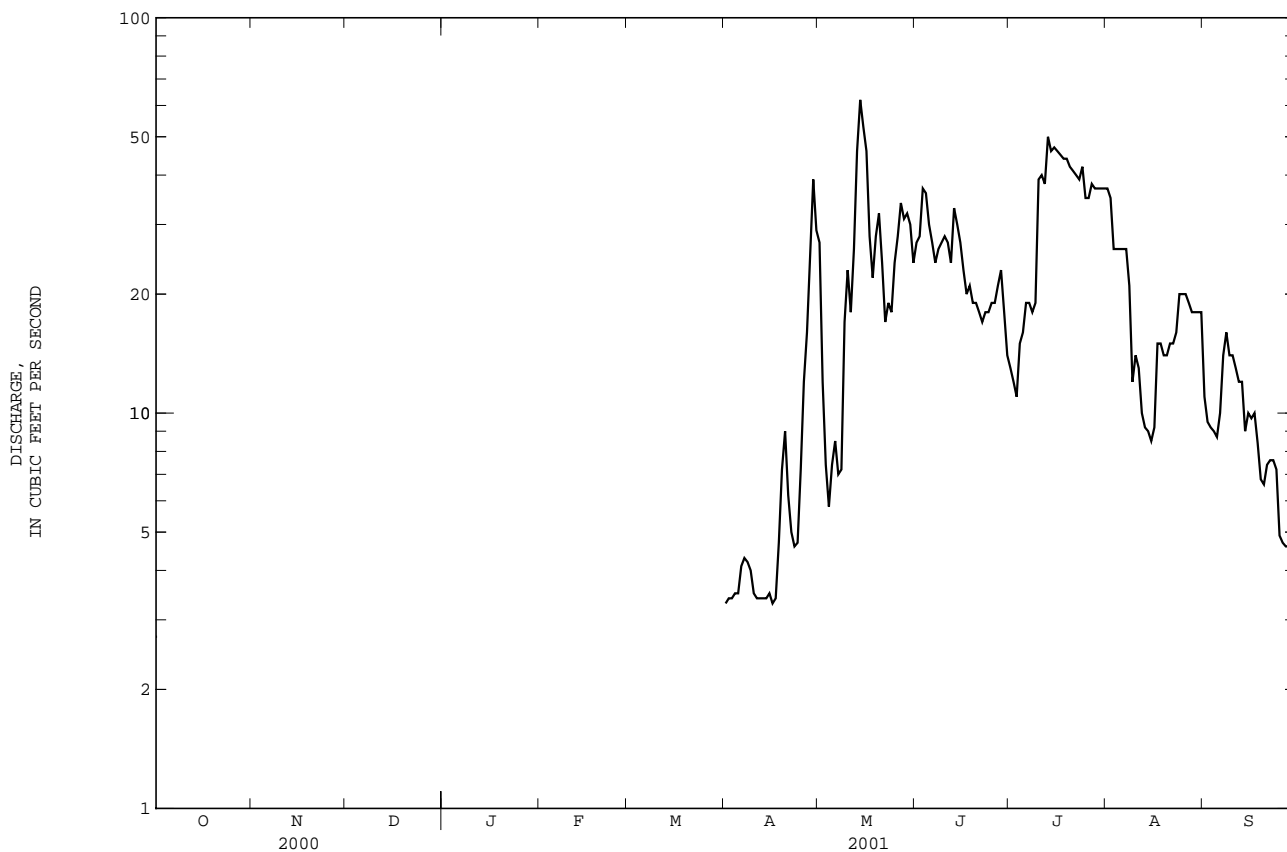
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1945 - 2001\*

ANNUAL MEAN	--		34.7	
HIGHEST ANNUAL MEAN	--		54.7	1963
LOWEST ANNUAL MEAN	--		16.1	1954
HIGHEST DAILY MEAN	62	May 14	1110	Jun 8 1997
LOWEST DAILY MEAN	3.3	Apr 1, 16		Sep 19 1954
MAXIMUM PEAK FLOW	97	May 15	2080 <sup>a</sup>	Jun 8 1997
MAXIMUM PEAK STAGE	4.54	May 15	8.80	Jun 8 1997
ANNUAL RUNOFF (AC-FT)	--		25120	

\* For period of operation.

a From rating curve extended above 610 ft<sup>3</sup>/s.

## YELLOWSTONE RIVER BASIN

06320210 CLEAR CREEK ABOVE KUMOR DRAW, NEAR BUFFALO, WY

LOCATION.--Lat 44°23'21", long 106°37'23", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.17, T.51 N., R.81 W., Johnson County, Hydrologic Unit 10090206, 10 ft upstream from bridge on State Highway 16, 0.7 mi upstream from Kumor Draw, and 5 mi northeast of Buffalo.

PERIOD OF RECORD.--January 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 23...	1020	42	655	16.1	147	8.4	765	10.0	5.0	E.035	E.027	.007	<.018
MAR 12...	1030	47	643	10.2	83	8.0	958	7.5	.00	.555	.132	.007	.088
MAY 29...	1015	47	645	9.7	113	8.2	310	22.0	14.5	<.040	<.050	<.006	.020
JUL 18...	1000	19	651	9.2	117	7.9	572	25.5	19.0	.066	E.036	.020	.041

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 23...	170	67
MAR 12...	44	30
MAY 29...	280	E220k
JUL 18...	270	280

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY

LOCATION.--Lat 44°27'59", long 107°02'03", in NW<sup>1</sup>/<sub>4</sub> sec.24, T.52 N., R.85 W., Johnson County, Hydrologic Unit 10090206, Bighorn National Forest, on left bank about 300 ft downstream from Willow Park Dam, 1.4 mi upstream from Kearny Creek, and 10 mi southwest of Story.

DRAINAGE AREA.--33.6 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1945 to September 1957 (no winter records prior to 1948), October 1959 to current year (no winter records since 1971).

REVISED RECORDS.--WSP 1309: 1949(M). WSP 1709: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,540 ft above sea level, from topographic map. Prior to Oct. 1, 1957, at site about 600 ft upstream at different datum. Oct. 1, 1959, to Sept. 30, 1965, at present site at datum 1.00 ft higher.

REMARKS.--Records good. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, and Willow Park Reservoir, capacity, 4,457 acre-ft. Storage began in Willow Park Reservoir in April 1959. Cloud Peak Reservoir enlarged December 1958. Water released from storage in Cloud Peak Reservoir is diverted just downstream from station into Rock Creek basin. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 10 . . . 10.4

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	52	65	84	48
2	---	---	---	---	---	---	---	---	52	65	78	46
3	---	---	---	---	---	---	---	---	52	65	67	46
4	---	---	---	---	---	---	---	---	52	65	63	45
5	---	---	---	---	---	---	---	---	51	65	62	45
6	---	---	---	---	---	---	---	---	47	67	62	44
7	---	---	---	---	---	---	---	---	40	64	61	43
8	---	---	---	---	---	---	---	---	42	62	51	41
9	---	---	---	---	---	---	---	---	44	61	46	40
10	---	---	---	---	---	---	---	---	44	63	47	39
11	---	---	---	---	---	---	---	---	47	64	45	39
12	---	---	---	---	---	---	---	---	54	85	42	39
13	---	---	---	---	---	---	---	---	58	123	42	38
14	---	---	---	---	---	---	---	---	58	123	42	37
15	---	---	---	---	---	---	---	---	57	123	39	36
16	---	---	---	---	---	---	---	---	56	122	42	35
17	---	---	---	---	---	---	---	---	56	119	49	34
18	---	---	---	---	---	---	---	---	56	116	52	34
19	---	---	---	---	---	---	---	---	53	111	52	33
20	---	---	---	---	---	---	---	---	45	108	55	34
21	---	---	---	---	---	---	---	---	41	107	60	34
22	---	---	---	---	---	---	---	26	40	105	60	33
23	---	---	---	---	---	---	---	30	40	103	63	32
24	---	---	---	---	---	---	---	27	42	102	64	30
25	---	---	---	---	---	---	---	30	45	99	63	28
26	---	---	---	---	---	---	---	30	45	101	62	27
27	---	---	---	---	---	---	---	32	47	111	59	25
28	---	---	---	---	---	---	---	38	56	102	56	22
29	---	---	---	---	---	---	---	42	66	95	55	22
30	---	---	---	---	---	---	---	43	65	93	55	22
31	---	---	---	---	---	---	---	43	---	85	53	---
TOTAL	---	---	---	---	---	---	---	---	1503	2839	1731	1071
MEAN	---	---	---	---	---	---	---	---	50.1	91.6	55.8	35.7
MAX	---	---	---	---	---	---	---	---	66	123	84	48
MIN	---	---	---	---	---	---	---	---	40	61	39	22
AC-FT	---	---	---	---	---	---	---	---	2980	5630	3430	2120

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2001, BY WATER YEAR (WY)\*

	MEAN	15.0	9.77	8.20	6.93	6.21	6.29	10.0	49.5	162	113	86.4	49.5
MAX		26.8	16.8	14.2	12.4	11.7	10.6	27.0	153	332	281	130	118
(WY)		1962	1960	1968	1968	1968	1968	1949	1948	1995	1975	1998	1998
MIN		6.47	.52	1.94	1.26	1.27	1.58	1.27	2.77	50.1	74.1	30.9	17.0
(WY)		1967	1967	1964	1964	1964	1964	1960	1967	2001	1956	1954	1954

YELLOWSTONE RIVER BASIN

06320500 SOUTH PINEY CREEK AT WILLOW PARK, WY--Continued

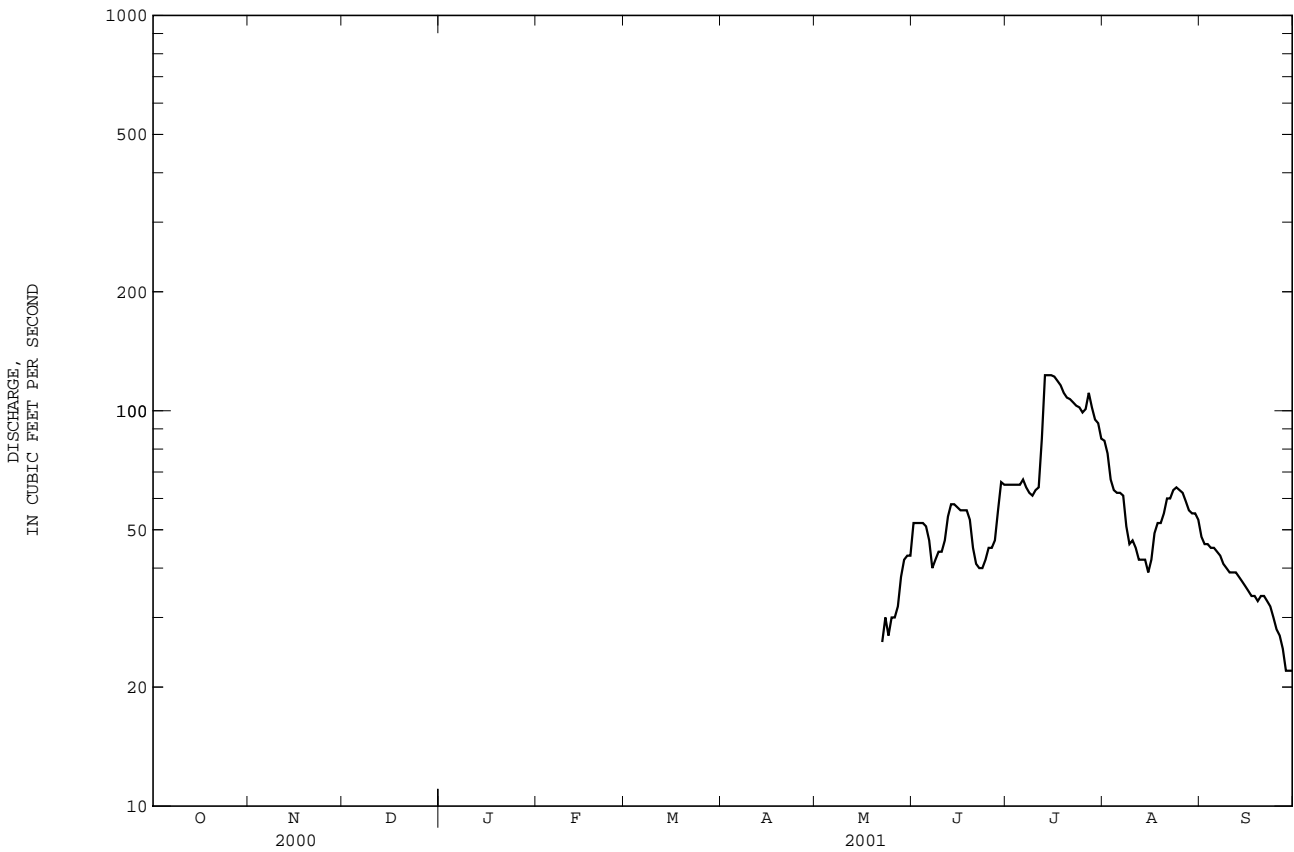
SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1947 - 2001*	
ANNUAL MEAN	--		42.4 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		55.9	1963
LOWEST ANNUAL MEAN	--		27.5	1960
HIGHEST DAILY MEAN	123	Jul 13-15	1100	Jun 8 1997
LOWEST DAILY MEAN	22	Sep 28-30	13 <sup>b</sup>	May 1 1989
MAXIMUM PEAK FLOW	125	Jul 13	1620 <sup>c</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	2.65	Jul 13	5.68	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		30700	

\* For period of operation.

a Unadjusted for regulation by reservoirs.

b Minimum daily, prior to construction of Willow Park Reservoir, 4.5 ft<sup>3</sup>/s, Mar. 1 to Apr. 5, 1955.

c From rating curve extended above 360 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.



06323000 PINEY CREEK AT KEARNY, WY

LOCATION.--Lat 44°32'08", long 106°49'18", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.26, T.53 N., R.83 W., Johnson County, Hydrologic Unit 10090206, on right bank at Kearny, 300 ft northeast of Historical Monument and 2.0 mi upstream from Little Piney Creek.

DRAINAGE AREA.--118 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1902 to June 1906, June to August 1910, May 1911 to July 1917, May 1919 to September 1923 (no winter records), October 1940 to Sept. 1998, Oct. 1998 to Sept. 1999 (no winter record). Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1176: 1944. WSP 1309: 1913(M). WSP 1509: 1906, 1920(M), 1941(M), 1942, 1943(M). WSP 1916: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,655.11 ft above sea level. Sept. 6, 1902, to June 30, 1906, nonrecording gage at site 50 ft upstream at different datum. May 14, 1911, to July 31, 1917, and May 1, 1919, to Sept. 30, 1923, nonrecording gage at site 50 ft upstream at present datum.

REMARKS.--Records good. Some regulation by Cloud Peak Reservoir, capacity, 3,385 acre-ft, Willow Park Reservoir, capacity, 4,457 acre-ft, and Kearny Lake, capacity, 1,860 acre-ft. Diversion upstream from station from South Piney Creek into Rock Creek basin for irrigation. Diversions upstream from station for irrigation of about 240 acres, of which about 90 acres are downstream from station. Record includes flow in bypass channel (Spring Creek), 300 ft left of main channel. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 2 . . . 3.82

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	25	126	5.9	26	13	14
2	---	---	---	---	---	---	27	116	7.1	25	17	12
3	---	---	---	---	---	---	32	116	15	25	12	11
4	---	---	---	---	---	---	34	113	19	20	11	13
5	---	---	---	---	---	---	35	124	14	19	9.2	15
6	---	---	---	---	---	---	39	138	9.6	16	9.2	17
7	---	---	---	---	---	---	41	118	7.4	16	11	22
8	---	---	---	---	---	---	43	116	6.5	15	15	33
9	---	---	---	---	---	---	41	128	7.8	12	16	20
10	---	---	---	---	---	---	39	122	7.4	7.1	16	18
11	---	---	---	---	---	---	41	94	6.8	9.2	14	7.1
12	---	---	---	---	---	---	39	96	11	11	13	8.0
13	---	---	---	---	---	---	39	99	17	38	13	12
14	---	---	---	---	---	---	39	101	24	42	14	17
15	---	---	---	---	---	---	38	107	26	47	13	19
16	---	---	---	---	---	---	51	63	14	44	13	14
17	---	---	---	---	---	---	55	54	9.6	37	14	11
18	---	---	---	---	---	---	63	28	8.5	26	15	12
19	---	---	---	---	---	---	70	25	9.4	15	13	12
20	---	---	---	---	---	---	76	23	6.8	13	9.2	14
21	---	---	---	---	---	---	66	16	5.3	16	16	14
22	---	---	---	---	---	---	63	9.6	8.7	15	16	13
23	---	---	---	---	---	---	61	9.9	21	12	13	12
24	---	---	---	---	---	---	64	9.6	19	15	14	11
25	---	---	---	---	---	---	70	9.9	19	13	17	11
26	---	---	---	---	---	---	88	11	14	17	15	10
27	---	---	---	---	---	---	101	13	12	21	14	9.6
28	---	---	---	---	---	---	106	15	16	16	12	7.8
29	---	---	---	---	---	---	109	20	27	15	11	6.8
30	---	---	---	---	---	---	129	17	28	13	13	7.1
31	---	---	---	---	---	---	---	6.2	---	14	12	---
TOTAL	---	---	---	---	---	---	1724	2044.2	402.8	630.3	413.6	403.4
MEAN	---	---	---	---	---	---	57.5	65.9	13.4	20.3	13.3	13.4
MAX	---	---	---	---	---	---	129	138	28	47	17	33
MIN	---	---	---	---	---	---	25	6.2	5.3	7.1	9.2	6.8
AC-FT	---	---	---	---	---	---	3420	4050	799	1250	820	800

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2001, BY WATER YEAR (WY)\*

	MEAN	30.4	36.1	31.1	27.3	26.3	30.8	70.1	272	373	94.3	30.6	25.6
MAX	85.4	76.9	53.6	44.3	54.4	72.8	204	683	911	413	153	185	
(WY)	1913	1999	1977	1997	1962	1972	1943	1944	1995	1975	1998	1923	
MIN	8.84	13.0	13.4	12.3	10.7	16.7	15.8	43.3	13.4	13.0	7.98	3.47	
(WY)	1965	1955	1966	1967	1960	1957	1981	1985	2001	1985	1980	1981	

## YELLOWSTONE RIVER BASIN

06323000 PINEY CREEK AT KEARNY, WY--Continued

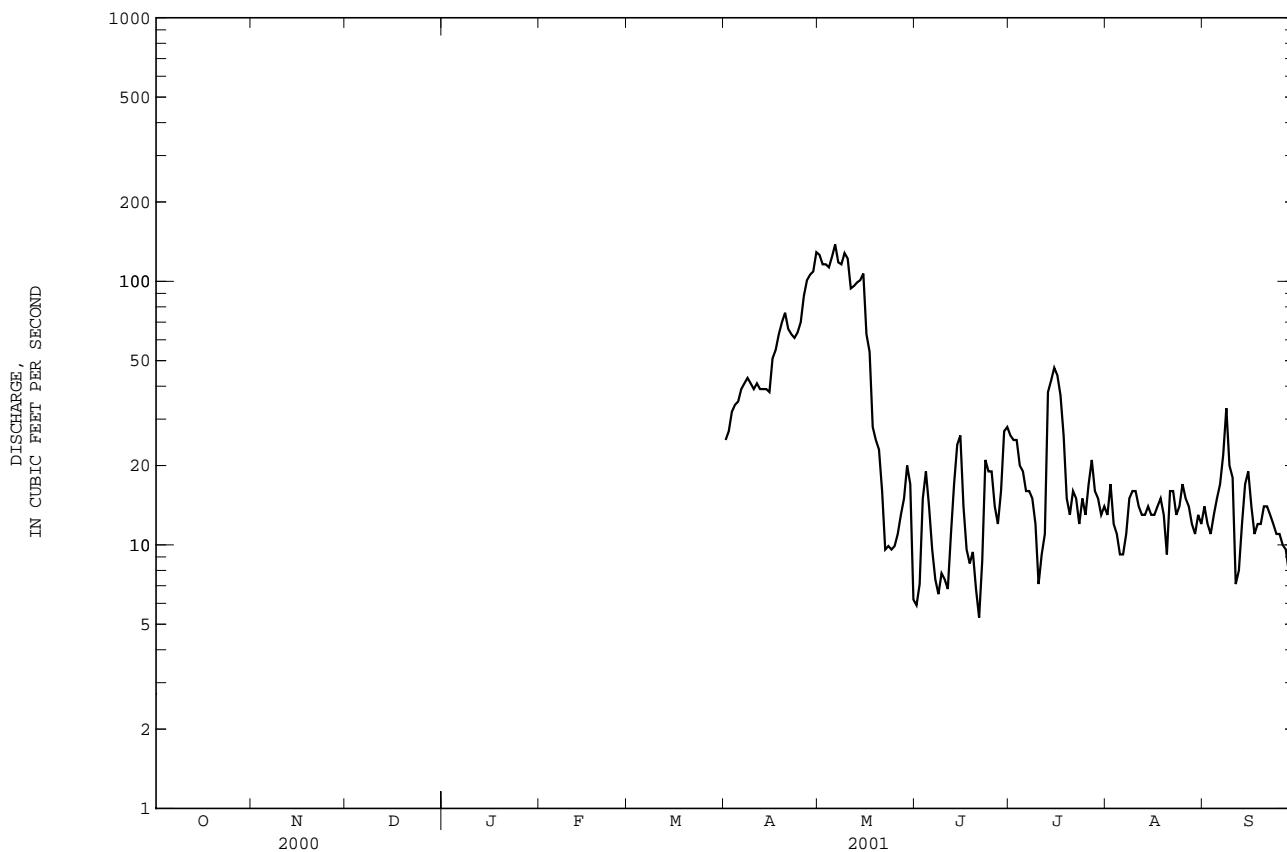
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1903 - 2001\*

ANNUAL MEAN	--		86.4	
HIGHEST ANNUAL MEAN	--		168	1944
LOWEST ANNUAL MEAN	--		27.8	1985
HIGHEST DAILY MEAN	138	May 6	1780	Jun 15 1963
LOWEST DAILY MEAN	5.3	Jun 21	1.9 <sup>a</sup>	Oct 3 1981
MAXIMUM PEAK FLOW	169	May 6	3410 <sup>a</sup>	Jun 15 1963
MAXIMUM PEAK STAGE	2.26	May 6	6.05	Jun 15 1963
ANNUAL RUNOFF (AC-FT)	--		62560	

\* For period of operation.

a From rating curve extended above 1,800 ft<sup>3</sup>/s.

## YELLOWSTONE RIVER BASIN

255

06324000 CLEAR CREEK NEAR ARVADA, WY

LOCATION.--Lat 44°52'18", long 106°04'56", in SE<sup>1</sup>/<sub>4</sub> sec.36, T.57 N., R.77 W., Sheridan County, Hydrologic Unit 10090206, 600 ft downstream from Cabin Creek, 1.8 mi upstream from mouth, and 16 mi north of Arvada.

PERIOD OF RECORD.--Water years 1949-54, 1967-92, October 2000 to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 24...	1025	118	675	10.7	102	8.5	993	11.0	8.0	420	103	39.3	4.56	
NOV 16...	1410	79	674	12.5	97	7.6	1110	-0.5	.00	520	122	52.5	4.28	
DEC 13...	1140	43	670	--	--	8.1	--	-8.0	.00	580	137	56.7	4.14	
JAN 11...	1035	47	--	11.1	--	7.6	1180	--	.00	490	117	49.4	3.89	
FEB 14...	1040	45	--	--	--	7.8	1260	-11.0	.00	550	129	55.9	3.97	
MAR 13...	1345	107	667	11.0	86	7.8	969	11.5	.00	410	96.4	41.7	6.13	
APR 11...	1830	46	670	9.7	99	8.1	1320	7.0	10.5	560	122	63.3	5.96	
MAY 10...	0840	76	671	7.6	87	8.2	756	15.0	15.5	310	71.3	31.9	3.66	
JUN 07...	0950	74	676	8.3	98	8.1	1020	22.5	17.5	440	108	40.6	5.54	
JUL 13...	1250	42	677	9.2	129	8.2	1270	28.5	26.5	550	115	62.6	6.51	
AUG 14...	1500	1.6	673	9.2	132	8.0	1580	32.0	27.0	640	128	76.5	7.84	
SEP 11...	1215	13	--	--	--	8.3	1810	20.5	17.5	770	151	94.3	7.18	
		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT. DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-PT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)
OCT 24...	1	49.2	198	3.4	.2	4.6	349	.96	224	704	671	--	--	
NOV 16...	1	63.1	257	3.0	.3	11.4	403	1.18	185	866	814	--	--	
DEC 13...	1	68.4	270	4.6	.2	9.8	441	1.29	110	946	884	--	--	
JAN 11...	1	62.2	251	3.8	.3	10.6	416	1.22	113	898	814	--	--	
FEB 14...	1	68.0	258	4.5	.2	11.2	447	1.29	115	946	874	--	--	
MAR 13...	1	52.1	181	5.0	.2	7.2	348	.99	211	730	665	--	--	
APR 11...	2	82.7	207	4.1	.2	.4	527	1.39	128	1020	930	--	--	
MAY 10...	1	40.6	153	2.6	.2	2.9	243	.72	109	533	488	1	.10	
JUN 07...	1	49.5	166	3.0	.3	5.3	382	1.02	149	748	694	4	.11	
JUL 13...	1	80.2	149	2.8	.2	11.1	531	1.34	112	986	900	1	.16	
AUG 14...	2	108	200	4.5	.3	5.4	684	1.68	5.32	1230	1140	3	.25	
SEP 11...	2	117	176	4.0	.2	7.1	870	2.02	52.2	1490	1360	2	.15	

## YELLOWSTONE RIVER BASIN

06324000 CLEAR CREEK NEAR ARVADA, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT 24...	<2.0	--	34.6	--	--	--	--	--	--	20	--	--	10.8
NOV 16...	<2.0	--	37.8	--	--	--	--	--	--	M	--	--	12.3
DEC 13...	<2.0	--	40.1	--	--	--	--	--	--	10	--	--	17.8
JAN 11...	<2.0	--	37.4	--	--	--	--	--	--	<10	--	--	15.5
FEB 14...	<2.0	--	38.1	--	--	--	--	--	--	M	--	--	14.5
MAR 13...	<2.0	--	32.2	--	--	--	--	--	--	40	--	--	27.4
APR 11...	<2.0	--	37.5	--	--	--	--	--	--	20	--	--	29.5
MAY 10...	<2.0	31.3	33.1	<.06	61	E.02	<.8	.30	2.0	10	<.08	14.1	16.6
JUN 07...	<2.0	36.8	38.9	<.06	74	.14	<.8	.36	3.1	<10	.09	21.7	16.2
JUL 13...	<2.0	30.0	31.3	<.06	123	E.02	E.4	.32	3.5	<10	<.08	27.4	13.0
AUG 14...	E1.0	51.2	54.8	<.06	145	<.04	<.8	.47	6.3	<10	E.04	36.3	80.0
SEP 11...	E1.1	32.7	38.0	<.06	164	.07	<.8	.39	7.6	20	E.05	35.2	38.3

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
OCT 24...	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--
JAN 11...	--	--	--	--	--	--	--	--	--
FEB 14...	--	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--	--
APR 11...	--	--	--	--	--	--	--	--	--
MAY 10...	1.1	.75	.5	<1.0	673	<.04	1.1	2	5.61
JUN 07...	2.8	1.72	.8	<1.0	789	<.04	1.7	8	7.33
JUL 13...	2.6	.62	.8	<1.0	1010	<.04	1.7	2	10.3
AUG 14...	2.8	.07	1.0	<1.0	1240	.07	.8	6	11.7
SEP 11...	2.5	<.06	.7	<1.0	1400	<.04	.8	5	21.6

E -- Estimated value.

M -- Presence verified, not quantified.



## 06324500 POWDER RIVER AT MOORHEAD, MT

LOCATION.--Lat 45°04'04", long 105°52'10", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.8, T.9 S., R.48 E., Powder River County, Hydrologic Unit 10090207, on left bank 500 ft downstream from discontinued post office at Moorhead, 6.2 mi upstream from Buffalo Creek, and at river mile 184.8.

DRAINAGE AREA.--8,088 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1929 to September 1972, October 1974 to current year. Monthly discharge only for some periods, published in WSP 1309.

REVISED RECORDS.--WSP 1309: 1932(M). WSP 1729: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,334.6 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Aug. 28, 1931, nonrecording gage at site 0.3 mi upstream at different datum. Aug. 28, 1931, to Mar. 21, 1956, water-stage recorder at site 1.2 mi upstream at different datum. Mar. 22 to July 24, 1956, nonrecording gage at site 0.3 mi downstream at different datum. July 25 to Sept. 12, 1956, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for period of estimated daily discharges, which are poor. Some regulation by three reservoirs in Wyoming with combined usable capacity of 36,800 acre-ft. Diversions for irrigation of about 66,300 acres upstream from station. U.S. Geological Survey data collection platform from satellite telemeter at station. Station operated and record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	240	e140	e140	e150	e170	263	195	41	16	9.9	2.2
2	221	259	e160	e140	e160	e180	248	329	47	12	9.7	2.3
3	237	249	e150	e150	e150	e180	238	353	117	9.9	9.5	2.5
4	249	251	e150	e140	e160	e190	235	384	257	17	9.3	2.7
5	255	e200	e160	e140	e150	e200	240	397	261	23	8.5	3.7
6	259	e140	e170	e130	e140	e210	247	403	336	28	6.4	4.0
7	236	e120	e160	e120	e140	e220	263	373	235	18	4.4	3.8
8	202	e140	e150	e120	e120	e240	269	335	176	12	3.0	4.0
9	200	e140	e140	e120	e130	e220	310	295	124	12	2.0	5.1
10	202	e140	e130	e130	e140	e240	306	266	98	12	1.5	e5.0
11	226	e130	e110	e130	e140	e240	273	232	103	11	1.0	e5.0
12	274	e140	e130	e140	e130	e240	252	218	93	376	.84	e5.0
13	297	e140	e150	e130	e130	e220	246	189	95	1260	.61	e5.0
14	287	e150	e140	e130	e140	e240	221	157	102	731	.51	e7.0
15	236	e160	e130	e140	e140	e260	208	137	84	528	.51	e10
16	234	e150	e150	e140	e140	e280	201	128	80	479	.50	e15
17	229	e150	e150	e140	e150	e340	195	114	106	339	.36	e15
18	224	e160	e150	e150	e150	e400	192	94	83	130	.21	e15
19	223	e150	e140	e140	e140	e420	184	121	65	89	.14	e15
20	223	e150	e120	e150	e150	e420	174	119	45	56	.12	15
21	223	e160	e130	e160	e150	446	200	89	37	37	.08	14
22	225	e150	e140	e150	e140	400	216	77	33	23	.12	14
23	223	e150	e130	e140	e140	393	213	73	31	42	.17	11
24	230	e160	e140	e160	e150	381	213	62	27	559	.18	7.1
25	235	e170	e140	e150	e140	374	208	53	25	108	.17	5.6
26	225	e160	e160	e140	e140	404	214	51	23	121	.16	6.4
27	223	e160	e160	e130	e150	399	220	50	19	237	.15	6.9
28	225	e150	e160	e140	e160	344	241	51	17	38	2.1	7.2
29	228	e170	e150	e160	---	304	217	49	16	17	2.1	7.7
30	231	e150	e140	e140	---	276	198	48	15	11	2.8	7.4
31	227	---	e140	e130	---	267	---	44	---	10	2.5	---
TOTAL	7205	4939	4470	4320	4020	9098	6905	5486	2791	5361.9	79.53	229.6
MEAN	232	165	144	139	144	293	230	177	93.0	173	2.57	7.65
MAX	297	259	170	160	160	446	310	403	336	1260	9.9	15
MIN	196	120	110	120	120	170	174	44	15	9.9	.08	2.2
AC-FT	14290	9800	8870	8570	7970	18050	13700	10880	5540	10640	158	455

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)\*

	MEAN	229	226	160	153	289	618	510	1069	1384	473	174	145
MAX	897	660	326	445	1200	2290	1314	5553	4131	2500	1219	686	
(WY)	1995	1999	1981	1981	1930	1947	1965	1978	1967	1937	1941	1982	
MIN	16.1	80.0	56.2	27.2	20.9	210	117	82.6	39.5	33.9	.60	1.28	
(WY)	1955	1936	1933	1950	1933	1935	1961	1934	1954	1961	1966	1960	

## YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1930 - 2001*	
ANNUAL TOTAL	110287		54905.03		--	
ANNUAL MEAN	301		150		452	
HIGHEST ANNUAL MEAN	--		--		1091	1978
LOWEST ANNUAL MEAN	--		--		109	1961
HIGHEST DAILY MEAN	3340	May 20	1260	Jul 13	27500	May 20 1978
LOWEST DAILY MEAN	26	Aug 27	.08 <sup>a</sup>	Aug 21	.00	Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	30	Aug 25	.14 <sup>b</sup>	Aug 19	.00	Sep 4 1960
MAXIMUM PEAK FLOW	--		1490 <sup>b</sup>	Jul 13	33000 <sup>d</sup>	May 20 1978
MAXIMUM PEAK STAGE	--		6.16 <sup>c</sup>	Mar 17	17.70 <sup>f</sup>	Mar 21 1956
ANNUAL RUNOFF (AC-FT)	218800		108900		327800	
10 PERCENT EXCEEDS	631		273		1060	
50 PERCENT EXCEEDS	244		140		220	
90 PERCENT EXCEEDS	47		5.0		46	

\* For period of operation.

a Site and datum then in use.

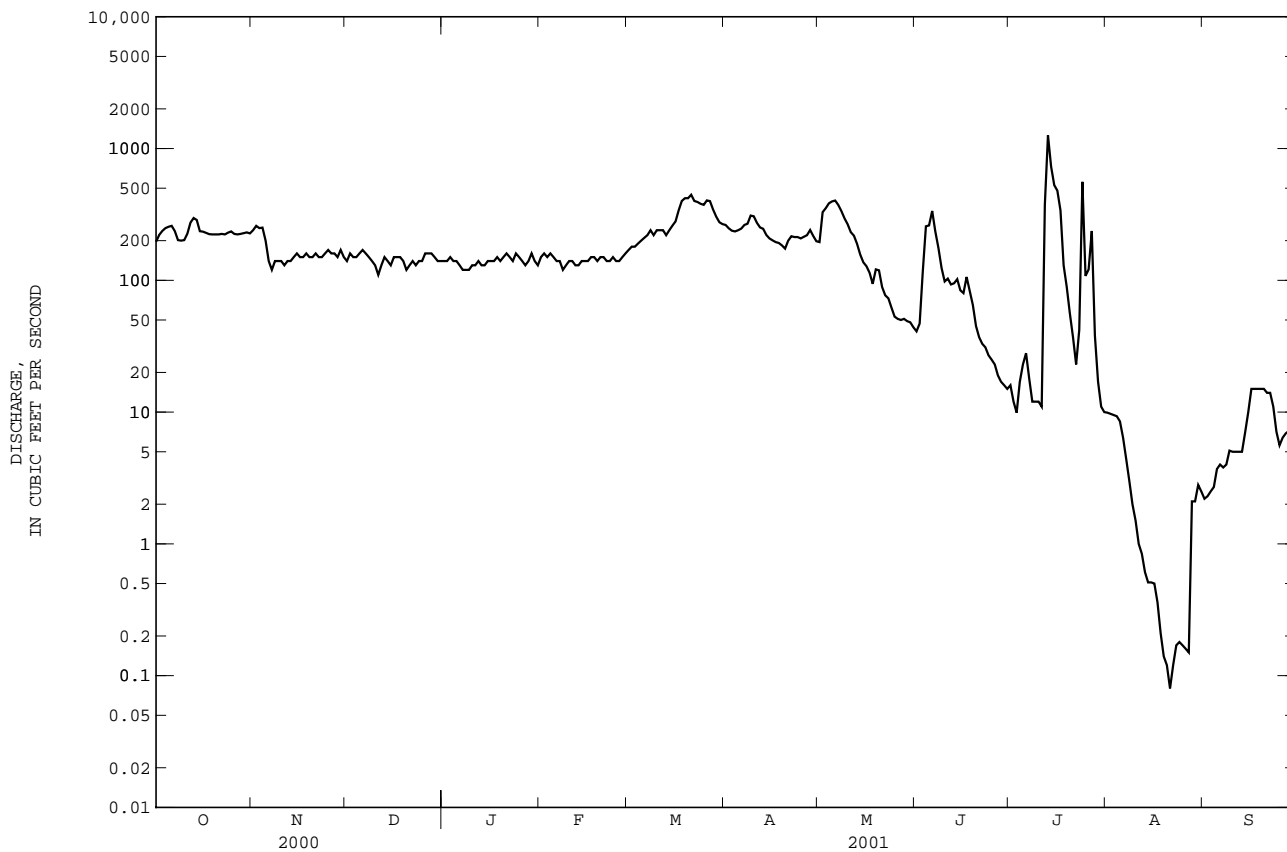
b Gage height, 3.77 ft.

c Backwater from ice.

d Gage height, 15.24 ft.

e Estimated.

f Ice jam, site and datum then in use.



## YELLOWSTONE RIVER BASIN

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06324500 POWDER RIVER AT MOORHEAD, MT--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951-53, 1956-67, 1969-72, 1975-77, May to September 2001.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1986 to November 1989, May to September 2001.

WATER TEMPERATURE: February 1951 to September 1953, October 1955 to September 1957, October 1974 to September 1977, March 1978 to September 1981 (seasonal records only).

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1977, March 1978 to September 1996 (seasonal records only).

INSTRUMENTATION.--Specific conductance probe installed May 20, 2001.

REMARKS.--Sample for July 17 had an extremely high suspended sediment concentration. Sample filtration for dissolved constituents was very difficult and probably affected by an unknown level of particulate contamination. Such values are qualified as either "Estimated" (E) or deleted. Missing specific conductance data for Sept. 11-19 due to equipment problems. Unpublished records of instantaneous water temperature and specific conductance are available in files of District office.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (water years 1986-90): Maximum daily, 4,150 microsiemens per centimeter (mS/cm) at 25.0 C, July 17, 1988; minimum daily, 642 mS/cm at 25.0 C, May 20, 1988.

WATER TEMPERATURE (water years 1951-53, 1955-57, 1975-81): Maximum daily, 33.0 C, July 14, 1981; minimum daily 0.0 C on many days during winter.

SEDIMENT CONCENTRATION: Maximum daily mean, 53,500 mg/L May 27, 1980; minimum daily mean, 3 mg/L Sept. 16-18, 1996.

SEDIMENT LOAD: Maximum daily, 2,230,000 tons May 20, 1978; minimum daily, 0.17 ton Aug. 1, 1988 and Sept. 16, 1996.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE (May to September): Maximum daily mean, 4,020 microsiemens per centimeter (mS/cm) at 25.0 C, July 6; minimum daily mean, 802 mS/cm at 25.0 C, July 27.

## WATER QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
MAY 2001											
14...	2000	151	665	5.6	78	8.5	1750	21.0	24.5	480	111
JUN 19...	1640	61	681	8.1	110	8.5	2390	22.0	24.5	730	154
JUL 17...	1145	363	671	5.7	79	8.3	2310	29.5	25.0	--	E295
AUG 28...	1800	2.2	--	--	--	8.4	3090	32.0	28.0	1100	190
SEP 04...	1600	2.7	--	--	--	8.3	3260	35.0	27.5	1200	204

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)
MAY 2001											
14...	49	7.0	4	184	183	99	.6	6.2	572	1.6	464
JUN 19...	83	10	4	264	178	109	.5	4.9	933	2.3	275
JUL 17...	E81	E18	E4	E286	E103	E38	E.7	E8.2	E1110	E2.6	E1860
AUG 28...	150	15	5	355	161	52	.4	.9	1560	3.3	14.4
SEP 04...	160	16	5	386	164	59	.3	1.1	1770	3.7	19.7

## YELLOWSTONE RIVER BASIN

06324500 POWDER RIVER AT MOORHEAD, MT--Continued

## WATER QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	NITRO- GEN,AM- MONIA DIS-SOLVED (MG/L) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) (00625)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L) (00631)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L) (00613)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L) (00671)	PHOS- PHORUS TOTAL (MG/L) (00665)	ALUM- INUM, DIS-SOLVED (UG/L) (01106)	ANTI- MONY, DIS-SOLVED (UG/L) (01095)	ARSENIC DIS-SOLVED (UG/L) (01000)	ARSENIC TOTAL (UG/L) (01002)
MAY 2001											
14...	1140	<.041	.57	<.005	<.001	<.007	.133	--	--	--	E2
JUN 19...	1670	<.040	.52	<.005	<.001	<.007	.079	2	.28	1.0	E2
JUL 17...	E1900	<.040	37	1.2	.001	.008	15	--	--	--	34
AUG 28...	2430	<.040	.73	.006	<.001	<.007	.026	4	.26	1.1	5
SEP 04...	2700	<.040	.74	E.007	<.001	<.007	.018	4	.23	.9	E1
DATE	BARIUM, DIS-SOLVED (UG/L) AS BA) (01005)	BARIUM, TOTAL RECOVERABLE (UG/L) AS BA) (01007)	BERYL- LIUM, DIS-SOLVED (UG/L) AS BE) (01010)	BORON, DIS-SOLVED (UG/L) AS B) (01020)	BORON, TOTAL RECOVERABLE (UG/L) AS B) (01022)	CADMIUM DIS-SOLVED (UG/L) AS CD) (01025)	CADMIUM TOTAL UNFLTRD (UG/L) AS CD) (01027)	CHRO- MIUM, DIS-SOLVED (UG/L) AS CR) (01030)	CHRO- MIUM, TOTAL RECOVERABLE (UG/L) AS CR) (01034)	COBALT, DIS-SOLVED (UG/L) AS CO) (01035)	COPPER, DIS-SOLVED (UG/L) AS CU) (01040)
MAY 2001											
14...	--	53	--	--	188	--	.07	--	<1	--	--
JUN 19...	43	55	<.06	247	264	E.02	.04	<.8	<1	.39	7.2
JUL 17...	--	739	--	--	336	--	9.8	--	133	--	--
AUG 28...	72	62	.12	290	302	<.07	1.1	<.8	<1	.31	12
SEP 04...	66	65	<.10	289	305	<.07	<.07	E.4	<1	.38	7.7
DATE	COPPER, TOTAL RECOVERABLE (UG/L) AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L) AS FE) (01045)	LEAD, DIS-SOLVED (UG/L) AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L) AS PB) (01051)	LITHIUM DIS-SOLVED (UG/L) AS LI) (01130)	MANGA- NESE, DIS-SOLVED (UG/L) AS MN) (01056)	MANGA- NESE, TOTAL RECOVERABLE (UG/L) AS MN) (01055)	MOLYB- DENUM, DIS-SOLVED (UG/L) AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L) AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L) AS NI) (01067)	SELE- NIUM, DIS-SOLVED (UG/L) AS SE) (01145)
MAY 2001											
14...	6.3	2140	--	2	--	--	71	--	--	9	--
JUN 19...	5.3	1430	<.08	18	75	6.6	47	3.7	2.2	5	3.0
JUL 17...	161	198000	--	171	--	--	4900	--	--	247	--
AUG 28...	8.9	190	E.10	<2	90	1.1	64	4.8	<.1	6	2.5
SEP 04...	8.1	120	.21	<2	99	8.1	60	4.7	<.1	6	1.5
DATE	SELE- NIUM, TOTAL (UG/L) AS SE) (01147)	SILVER, DIS-SOLVED (UG/L) AS AG) (01075)	STRON- TIUM, DIS-SOLVED (UG/L) AS SR) (01080)	THAL- LIUM, DIS-SOLVED (UG/L) AS TL) (01057)	VANA- DIUM, DIS-SOLVED (UG/L) AS V) (01085)	ZINC, DIS-SOLVED (UG/L) AS ZN) (01090)	ZINC, TOTAL RECOVERABLE (UG/L) AS ZN) (01092)	URANIUM NATURAL DIS-SOLVED (UG/L) AS U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
MAY 2001											
14...	2.8	--	--	--	--	--	10	--	94	158	64
JUN 19...	2.6	<1	1860	<.04	1.1	4	8	13	99	83	14
JUL 17...	7.2	--	--	--	--	--	601	--	99	25900	25400
AUG 28...	1.1	<2	2470	<.08	.6	8	7	17	--	--	--
SEP 04...	1.8	<2	2540	<.08	E.3	4	5	17	74	13	.09

E--Estimated.

## YELLOWSTONE RIVER BASIN

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06324500 POWDER RIVER AT MOORHEAD, MT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									2430	3310	1700	3270
2									2440	3250	1840	3290
3									2570	2950	1990	3330
4									2810	3080	2130	3320
5									2800	3410	2220	3150
6									2870	4020	2390	3170
7									2750	3950	2570	3110
8									2660	3260	2750	2940
9									2560	3040	2940	2770
10									2500	2810	3140	2700
11									2500	2780	3310	---
12									2460	2610	3470	---
13									2460	1520	3590	---
14									2460	1720	3850	---
15									2410	2020	3870	---
16									2380	2310	3700	---
17									2430	2450	3550	---
18									2370	2300	3420	---
19									2390	2230	3450	---
20									2540	2180	3540	1870
21								2520	2790	2080	3590	1830
22								2540	2910	1950	3610	1850
23								2580	3060	1910	3630	1910
24								2590	2970	1270	3630	1980
25								2550	3120	1390	3550	2040
26								2530	3180	1420	3430	2100
27								2520	3090	802	3340	2140
28								2510	3210	958	3130	2200
29								2500	3340	1170	3140	2210
30								2480	3360	1350	3220	2190
31								2450	---	1530	3260	---
MEAN								---	2730	2290	3130	---
MAX								---	3360	4020	3870	---
MIN								---	2370	802	1700	---

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY

LOCATION.--Lat 44°55'37", long 105°21'10", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.13, T.57 N., R.71 W., Campbell County, Hydrologic Unit 10090208, on left bank 3.1 mi upstream from Dry Creek, 5.0 mi south of the Wyoming-Montana State line, and 20 mi north of Weston.

DRAINAGE AREA.--1,235 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR WY-77-1: Drainage area. WDR WY-78-1: 1976(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 80 acres downstream from station. Flow occasionally affected by contributions from mine dewatering. U.S. Geological Survey satellite telemetry at station. Water-quality data are published in the special studies section of this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.01	e2.8	2.0	1.3	1.5	2.3	e8.6	7.0	2.1	1.8	6.5	.02
2	e.06	e2.5	1.9	1.3	1.4	2.8	8.5	6.6	2.1	1.9	4.8	.01
3	e.06	e3.6	2.0	1.3	1.4	12	9.1	5.9	2.8	1.5	3.6	.01
4	e.13	e4.9	2.0	1.2	1.3	51	9.6	5.4	3.5	2.5	2.7	.01
5	e.20	e3.6	2.1	1.3	e1.3	e65	22	5.1	3.6	1.6	2.2	.02
6	e.25	e2.5	2.0	1.6	e1.2	e74	52	5.7	3.4	1.4	1.7	.03
7	e.35	e1.8	2.1	1.7	e1.1	e150	62	5.6	3.5	1.1	1.3	.04
8	e.55	1.9	2.1	1.6	e1.1	e100	38	5.8	3.7	1.0	1.1	.03
9	e.50	e1.7	1.9	1.6	e1.3	e70	30	4.7	4.6	3.0	.89	.02
10	e.40	e1.5	1.6	1.5	e1.6	e54	22	4.9	3.6	1.4	.74	.01
11	e.65	e1.3	e1.4	1.6	e1.7	e50	17	4.6	2.9	1.3	.65	.09
12	e.60	e1.4	e1.2	1.6	e1.8	e56	13	4.3	3.0	9.1	.55	.02
13	e.75	e1.5	e1.0	1.7	e1.6	e66	11	3.8	4.4	9.1	.58	.01
14	e1.3	e1.6	1.1	1.6	e1.4	e70	9.0	3.4	21	26	.54	.03
15	e1.5	e1.6	1.1	1.6	e1.6	e56	8.0	3.2	30	24	.47	.03
16	36	e1.8	e1.0	1.7	e1.7	e26	7.2	3.3	9.7	8.4	.44	.01
17	6.9	e2.0	1.1	e1.8	e2.0	e14	6.8	3.2	9.0	40	.42	.01
18	3.7	2.2	1.1	e1.6	2.2	e7.6	6.5	3.2	7.8	13	.38	.02
19	2.7	e1.9	1.2	e1.5	2.0	e5.6	6.5	3.1	5.9	5.2	.29	.02
20	2.1	2.2	e1.1	e1.4	1.8	e5.8	6.4	3.5	4.7	3.5	.27	.02
21	1.6	2.0	e.96	e1.5	1.7	e6.2	7.0	3.6	3.9	2.4	.30	.01
22	1.9	2.1	e1.1	e1.6	1.8	e6.2	8.4	3.4	2.9	1.7	.26	.01
23	1.8	2.1	e1.3	e1.7	2.0	e6.2	28	3.1	2.3	1.9	.15	.01
24	1.7	2.1	e1.2	1.8	1.9	e6.7	24	2.9	2.1	54	.13	.01
25	1.8	2.2	e1.3	1.7	1.7	e9.0	22	2.7	5.0	252	.12	.01
26	1.9	2.1	e1.4	e1.5	1.6	e12	19	2.5	5.8	125	.04	.01
27	1.8	2.1	1.5	e1.4	1.7	e11	14	2.2	2.0	58	.04	.01
28	2.0	e2.0	1.2	e1.5	2.1	e11	9.9	2.1	1.4	53	.03	.01
29	2.1	1.9	1.2	1.6	---	e10	8.1	2.1	1.2	31	.03	.01
30	2.5	1.8	e1.1	1.6	---	e9.2	6.9	2.1	1.5	12	.05	.01
31	2.4	---	e1.2	1.5	---	e8.8	---	2.2	---	8.7	.02	---
TOTAL	80.21	64.7	44.46	47.9	45.5	1034.4	500.5	121.2	159.4	756.5	31.29	0.56
MEAN	2.59	2.16	1.43	1.55	1.62	33.4	16.7	3.91	5.31	24.4	1.01	.019
MAX	36	4.9	2.1	1.8	2.2	150	62	7.0	30	252	6.5	.09
MIN	.01	1.3	.96	1.2	1.1	2.3	6.4	2.1	1.2	1.0	.02	.01
AC-FT	159	128	88	95	90	2050	993	240	316	1500	62	1.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2001, BY WATER YEAR (WY)

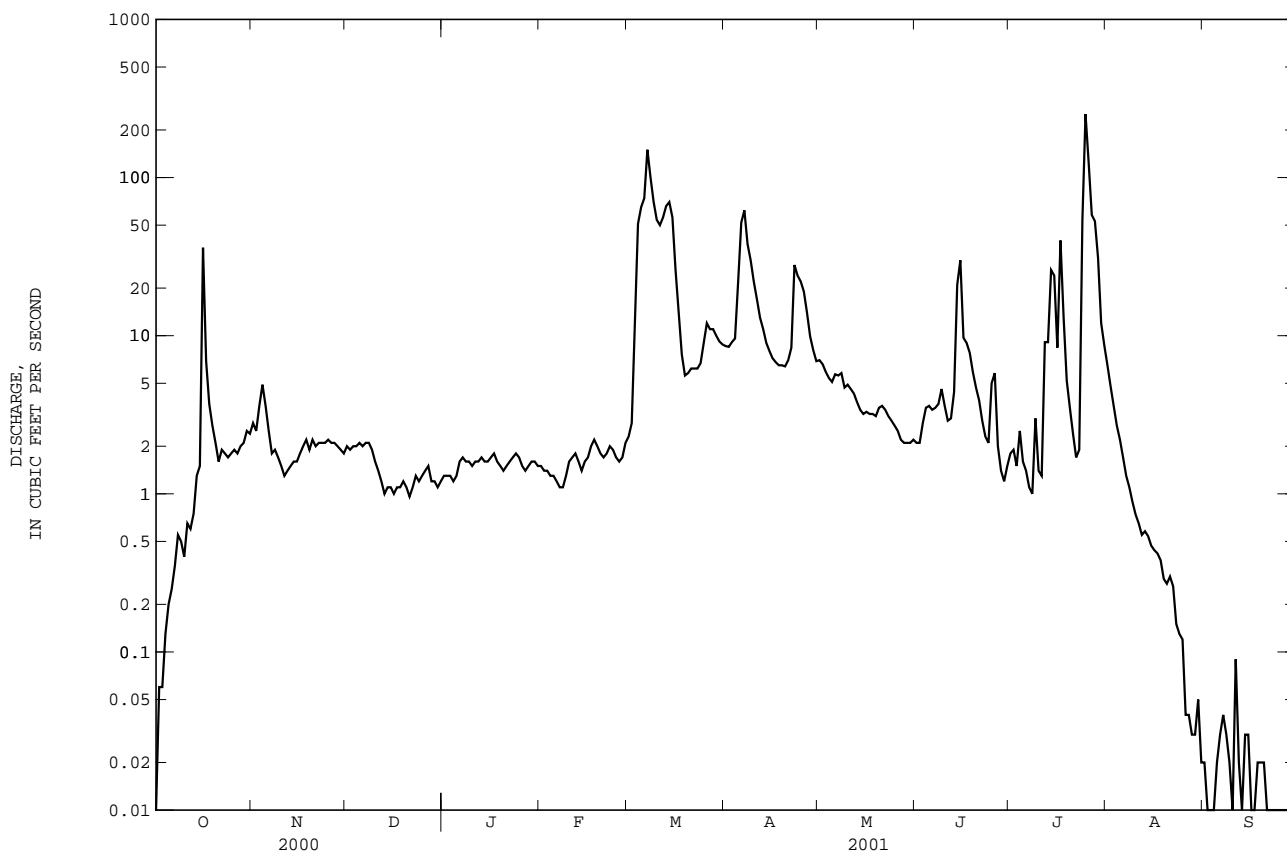
MEAN	11.7	3.95	2.61	8.33	38.9	62.0	24.3	59.9	29.3	11.4	5.72	4.13
MAX	172	25.4	9.97	89.0	336	613	99.3	703	187	68.8	44.8	60.8
(WY)	1995	1999	1995	1974	1997	1978	1999	1978	1984	1982	1993	1986
MIN	.009	.015	.21	.10	.46	1.34	.75	1.04	2.11	.044	.000	.002
(WY)	1992	1982	1982	1991	1989	1981	1981	1992	1988	1980	1991	1991

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK, NEAR WESTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1973 - 2001
ANNUAL TOTAL	1737.94	2886.62	--
ANNUAL MEAN	4.75	7.91	21.8
HIGHEST ANNUAL MEAN	--	--	127 1978
LOWEST ANNUAL MEAN	--	--	1.49 1992
HIGHEST DAILY MEAN	93 May 19	252 Jul 25	5000 May 19 1978
LOWEST DAILY MEAN	.00 Many days	.01 Many days	.00 Many days, some years
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 17	.01 Sep 21	.00 Many days, some years
MAXIMUM PEAK FLOW	--	314 Jul 25	5300 <sup>a</sup> May 19 1978
MAXIMUM PEAK STAGE	--	6.14 Jul 25	11.63 Mar 20 1978
ANNUAL RUNOFF (AC-FT)	3450	5730	15780
10 PERCENT EXCEEDS	9.7	15	35
50 PERCENT EXCEEDS	2.8	1.9	3.0
90 PERCENT EXCEEDS	.01	.06	.03

a Gage height, 11.62 ft.

e Estimated.



## CHEYENNE RIVER BASIN

06364700 ANTELOPE CREEK NEAR TECKLA, WY

LOCATION.--Lat 43°29'08", long 105°13'39", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.35, T.41 N., R.70 W., Converse County, Hydrologic Unit 10120101, on left bank 0.4 mi downstream from Porcupine Creek, 9 mi southeast of Teckla, and 18 mi north of Bill.

PERIOD OF RECORD.--Water years 1977-81, 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
NOV 13...	1200	.15	650	--	--	--	3010	-7.0	2.0	1300	311	124	18.6
MAR 15...	1220	.28	650	8.2	75	7.3	2890	4.5	4.5	1200	303	118	15.2
MAY 07...	0930	.41	653	8.0	82	7.4	2860	13.0	9.5	1300	306	119	17.4
JUN 05...	0940	.21	645	6.5	73	7.3	2950	14.5	12.5	1200	293	118	20.1
JUL 10...	0930	84	651	5.5	72	7.4	885	23.0	20.5	300	78.7	24.7	10.4
AUG 13...	0945	.00	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	0910	.00	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)
NOV 13...	3	259	458	21.9	.6	22.0	1410	3.61	1.08	2660	2450	<2.0	32.3
MAR 15...	3	241	403	22.8	.6	18.1	1360	3.53	1.96	2600	2330	<2.0	26.6
MAY 07...	3	253	396	23.8	.6	18.4	1440	3.74	3.05	2750	2410	<2.0	29.7
JUN 05...	3	257	397	23.4	.7	19.9	1380	3.50	1.46	2570	2350	<2.0	27.6
JUL 10...	2	61.7	83	6.5	.3	9.2	340	.87	146	643	581	<2.0	141
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 13...	550	2400
MAR 15...	E20	2190
MAY 07...	<30	1730
JUN 05...	<30	1460
JUL 10...	20	20.1
AUG 13...	--	--
SEP 10...	--	--

E -- Estimated value.



06376300 BLACK THUNDER CREEK NEAR HAMPSHIRE, WY

LOCATION.--Lat 43°34'51", long 104°43'04", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.31, T.42 N., R.65 W., Weston County, Hydrologic Unit 10120103, 20 ft downstream from bridge on county road, 1.3 mi west of Hampshire, and 4.0 mi upstream from mouth.

PERIOD OF RECORD.--Water years 1980-81, 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
NOV 13...	1415	.60	655	10.3	84	--	1850	-1.5	.5	390	63.8	56.0	13.9
JAN 08...	1145	1.2	--	--	--	7.9	2060	8.5	.00	510	98.6	63.8	15.2
MAY 07...	1330	1.5	662	9.4	102	8.1	2030	19.5	12.0	540	96.6	72.3	13.9
JUN 05...	1355	3.6	655	9.2	107	8.2	1990	22.5	15.0	440	73.2	62.8	12.8
JUL 10...	1500	354	660	3.0	41	7.8	372	26.5	22.5	110	24.9	11.3	8.23
AUG 13...	1315	.00	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	1155	.00	--	--	--	--	--	--	--	--	--	--	--

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)
NOV 13...	6	272	453	25.6	1.2	2.9	527	1.78	2.12	1310	1230	E1.1	40.1
JAN 08...	6	309	615	26.1	1.6	6.2	555	2.03	4.96	1490	1440	<2.0	74.0
MAY 07...	5	263	352	23.1	1.0	.9	753	2.11	6.23	1550	1430	<2.0	81.5
JUN 05...	6	278	274	24.5	.9	1.4	760	1.96	14.0	1440	1380	E1.0	85.6
JUL 10...	1	24.2	76	3.1	.4	5.8	88.0	.32	227	237	212	<2.0	878
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
------	---	---

NOV 13...	<10	11.9
JAN 08...	<30	14.4
MAY 07...	<30	36.6
JUN 05...	<30	15.4
JUL 10...	20	4.7
AUG 13...	--	--
SEP 10...	--	--

E -- Estimated value.

## CHEYENNE RIVER BASIN

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY

LOCATION.--Lat 44°05'06", long 104°03'36", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.4, T.47 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank in Mallo Campgrounds, 250 ft upstream from mouth, 750 ft upstream from dam on Stockade Beaver Creek, and 3.8 mi east of Four Corners.

DRAINAGE AREA.--10.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

REVISED RECORD.--WDR-85-1: 1981, 1982.

GAGE.--Water-stage recorder. Elevation of gage is 6,030 ft above sea level, from topographic map. October 1974 to September 1982, at site 50 ft upstream and datum 3.11 ft lower.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	1.7	1.8	e1.6	1.8	e1.6	1.7	3.0	2.8	2.5	2.1	2.1
2	2.9	1.5	e1.7	1.8	1.9	e1.8	1.7	2.7	2.6	2.3	3.0	2.0
3	2.7	2.1	1.8	1.9	1.9	1.9	1.7	2.5	2.6	3.1	2.7	2.6
4	2.9	1.9	1.7	1.9	1.8	1.9	1.7	3.1	2.9	2.5	2.8	2.4
5	2.9	1.9	1.7	1.8	1.8	1.9	1.9	2.5	2.7	2.6	2.7	2.4
6	2.9	e1.8	1.6	1.8	1.7	1.8	2.3	2.6	2.5	2.5	2.6	2.1
7	2.9	e1.7	1.6	1.8	e1.6	1.8	2.4	3.0	2.5	2.5	2.4	1.5
8	2.8	e1.6	1.6	1.6	e1.6	1.8	2.2	2.7	3.1	2.2	3.7	1.5
9	2.8	e1.7	1.6	1.6	e1.7	1.8	2.0	2.5	2.6	3.4	3.1	1.5
10	2.8	1.8	e1.5	1.7	1.8	1.8	2.0	2.2	2.7	3.2	2.9	1.4
11	2.6	1.7	e1.4	1.7	1.8	1.8	2.0	2.3	2.7	2.1	2.8	1.4
12	2.6	1.6	1.2	1.7	1.8	1.8	1.9	2.2	2.5	2.0	2.7	1.4
13	2.6	1.6	1.4	1.7	1.8	1.8	1.9	3.0	2.6	2.8	2.6	1.4
14	2.4	1.5	1.8	1.7	e1.7	1.8	1.8	2.5	2.5	2.9	2.6	2.5
15	2.4	1.9	2.0	1.7	e1.6	e1.8	1.8	2.9	3.1	2.7	2.6	1.0
16	2.3	1.9	1.7	1.6	e1.7	e1.9	1.8	2.6	2.6	2.7	3.2	1.3
17	2.3	1.6	2.0	1.5	1.8	1.8	1.7	2.3	2.5	2.5	2.9	1.4
18	2.0	1.9	2.1	1.7	1.9	1.9	1.8	2.3	2.4	2.5	2.8	1.4
19	2.1	1.9	2.0	1.6	1.9	1.9	2.0	2.3	2.4	2.3	2.7	1.4
20	2.2	1.8	1.9	1.7	1.9	1.9	2.2	2.6	2.4	3.1	2.8	1.5
21	2.1	1.7	1.5	1.7	1.9	1.9	2.2	1.8	2.9	2.5	2.7	1.4
22	2.1	1.7	1.8	1.7	1.9	2.0	2.1	2.0	2.5	2.5	2.7	1.4
23	2.1	1.7	1.9	1.7	1.9	1.9	3.8	2.7	2.5	2.4	2.4	1.3
24	2.0	1.6	1.9	1.6	1.9	1.9	2.8	2.3	2.6	2.9	3.1	1.3
25	2.0	1.6	1.8	1.7	1.8	1.9	2.6	2.7	2.7	2.6	2.8	1.3
26	1.9	1.6	1.7	1.7	1.8	1.9	2.6	2.4	2.4	3.3	2.8	3.0
27	2.0	1.7	1.8	1.6	1.8	1.6	2.6	2.2	3.1	2.8	2.8	2.6
28	2.1	1.7	1.8	1.7	e1.7	1.7	2.6	3.2	2.6	2.8	2.4	2.4
29	2.0	1.6	1.8	1.8	---	1.7	2.4	2.9	2.6	2.7	2.4	2.3
30	2.0	1.7	1.8	1.8	---	1.7	3.3	2.6	2.5	2.5	2.3	3.1
31	2.0	---	e1.7	1.7	---	1.7	---	2.2	---	2.3	2.1	---
TOTAL	74.6	51.7	53.6	52.8	50.2	56.4	65.5	78.8	79.1	81.7	84.2	54.3
MEAN	2.41	1.72	1.73	1.70	1.79	1.82	2.18	2.54	2.64	2.64	2.72	1.81
MAX	3.2	2.1	2.1	1.9	1.9	2.0	3.8	3.2	3.1	3.4	3.7	3.1
MIN	1.9	1.5	1.2	1.5	1.6	1.6	1.7	1.8	2.4	2.0	2.1	1.0
AC-FT	148	103	106	105	100	112	130	156	157	162	167	108

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
MEAN	1.93	1.80	1.69	1.62	1.79	2.08	2.36	2.26	2.43	2.16	2.03	1.95
MAX	3.16	3.30	2.68	2.95	2.90	5.83	4.07	3.44	4.05	3.09	2.89	3.08
(WY)	2000	2000	1999	1999	1999	1999	1994	1978	1980	1979	1978	2000
MIN	.31	.47	.44	.42	.46	.71	.88	.81	1.34	1.34	.75	.62
(WY)	1977	1977	1977	1993	1977	1977	1993	1993	1994	1993	1976	1976

06392900 BEAVER CREEK AT MALLO CAMP, NEAR FOUR CORNERS, WY--Continued

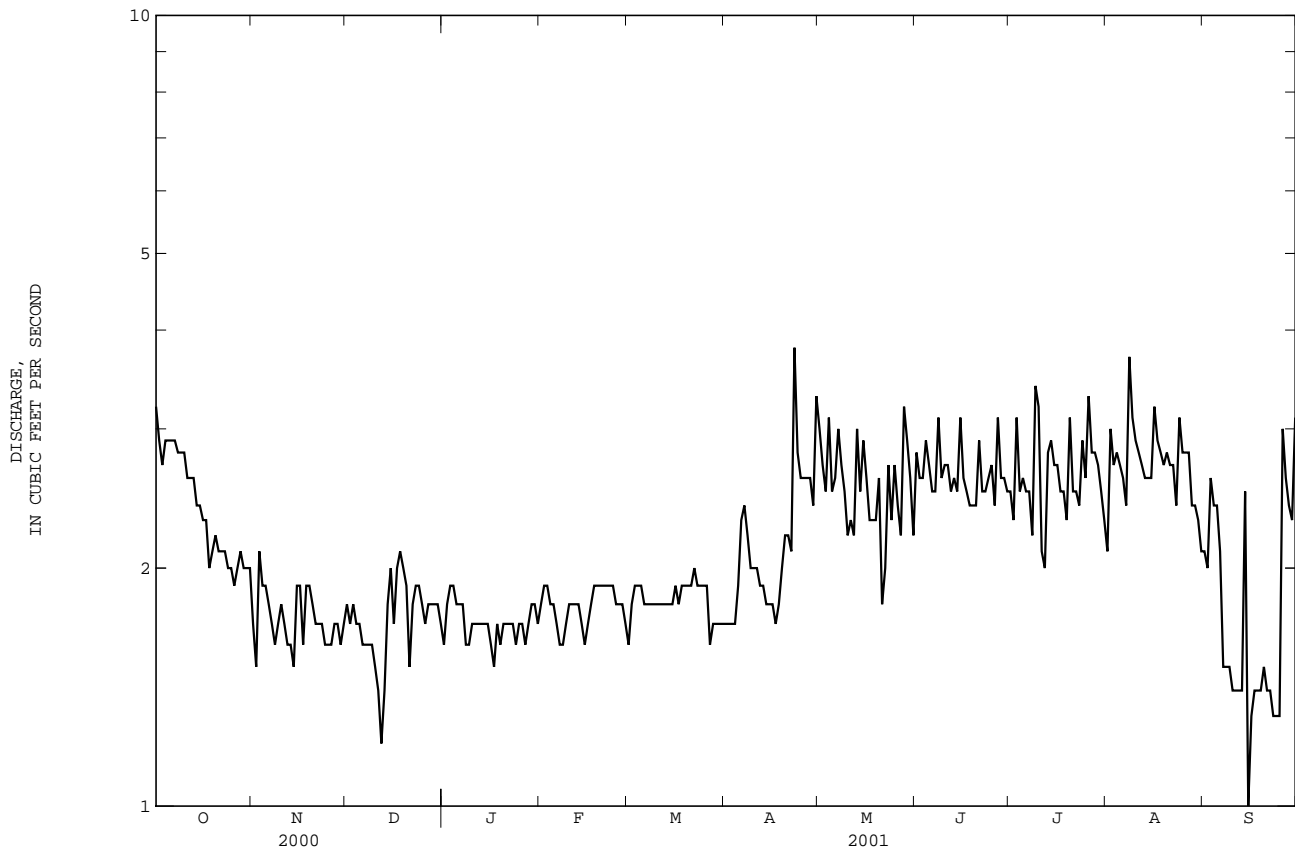
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1975 - 2001	
ANNUAL TOTAL	916.4		782.9		--	
ANNUAL MEAN	2.50		2.14		2.02	
HIGHEST ANNUAL MEAN	--		--		3.20	
LOWEST ANNUAL MEAN	--		--		.94	
HIGHEST DAILY MEAN	4.2	Apr 23	3.8	Apr 23	34	Mar 26 1999
LOWEST DAILY MEAN	1.2	Dec 12	1.0	Sep 15	.10	Jan 20 1993
ANNUAL SEVEN-DAY MINIMUM	1.5	Dec 7	1.3	Sep 15	.12	Jan 17 1993
MAXIMUM PEAK FLOW	--		26 <sup>a</sup>	Apr 23	103 <sup>b</sup>	Apr 22 1994
MAXIMUM PEAK STAGE	--		1.83 <sup>c</sup>	Feb 15	2.88 <sup>c</sup>	Dec 25 1998
ANNUAL RUNOFF (AC-FT)	1820		1550		1460	
10 PERCENT EXCEEDS	3.2		2.8		2.9	
50 PERCENT EXCEEDS	2.6		2.0		1.9	
90 PERCENT EXCEEDS	1.7		1.6		1.2	

a Gage height, 1.55 ft.

b From rating curve extended above 85 ft<sup>3</sup>/s.

c Backwater from ice.

e Estimated.



## CHEYENNE RIVER BASIN

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY

LOCATION.--Lat 43°51'32", long 104°06'24", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.19, T.45 N., R.60 W., Weston County, Hydrologic Unit 10120107, on right bank 20 ft upstream of culvert on county road, 0.6 mi upstream from South Draw, 2.5 mi upstream from LAK Reservoir Dam, and 4.7 mi east of Newcastle.

DRAINAGE AREA.--107 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,460 ft above sea level, from topographic map. October 1974 to September 1982, at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. A few small diversions upstream from station for irrigation. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	19	17	17	17	18	19	18	9.3	16	14
2	16	20	18	17	17	17	18	19	18	9.5	16	14
3	16	19	18	17	18	17	19	18	18	9.8	16	13
4	17	19	18	16	17	18	19	19	18	10	16	13
5	17	19	18	16	17	18	19	18	17	9.9	16	13
6	17	19	18	16	17	19	19	18	16	9.5	16	13
7	17	19	18	16	e17	19	21	18	15	9.1	16	13
8	17	19	19	16	e16	19	20	18	15	12	17	14
9	18	19	18	16	e15	19	19	18	15	21	15	14
10	18	19	18	17	e16	19	18	18	15	20	14	14
11	17	19	e17	17	e17	18	19	18	15	13	13	14
12	16	19	e15	17	e17	18	18	19	14	13	13	13
13	16	19	e17	17	e17	18	18	19	14	12	12	13
14	16	19	19	17	e16	18	18	19	14	13	16	20
15	16	19	18	17	e16	18	19	18	14	19	14	17
16	16	19	e16	16	e16	17	18	18	14	17	13	15
17	16	19	e18	16	e17	18	18	18	13	16	12	15
18	16	19	18	16	e18	18	18	18	13	16	11	15
19	16	19	17	17	e19	18	18	18	13	16	11	15
20	16	19	e17	17	e18	18	18	18	13	15	11	15
21	16	19	e16	17	18	19	18	18	14	15	11	14
22	16	19	18	17	17	19	19	18	14	16	11	15
23	16	19	18	17	17	19	20	17	14	16	11	14
24	17	19	18	17	18	18	19	17	14	16	11	15
25	17	19	18	17	17	19	19	17	13	16	11	15
26	17	19	17	17	17	18	19	17	11	15	10	15
27	17	19	17	17	17	18	19	17	10	15	10	15
28	17	19	17	17	17	18	19	17	9.7	15	10	14
29	18	18	17	18	---	18	19	18	9.5	15	12	13
30	18	19	17	18	---	18	19	19	9.3	15	13	14
31	18	---	17	18	---	18	---	18	---	16	13	---
TOTAL	517	571	544	521	476	563	562	559	420.5	440.1	407	431
MEAN	16.7	19.0	17.5	16.8	17.0	18.2	18.7	18.0	14.0	14.2	13.1	14.4
MAX	18	20	19	18	19	19	21	19	18	21	17	20
MIN	16	18	15	16	15	17	18	17	9.3	9.1	10	13
AC-FT	1030	1130	1080	1030	944	1120	1110	1110	834	873	807	851

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

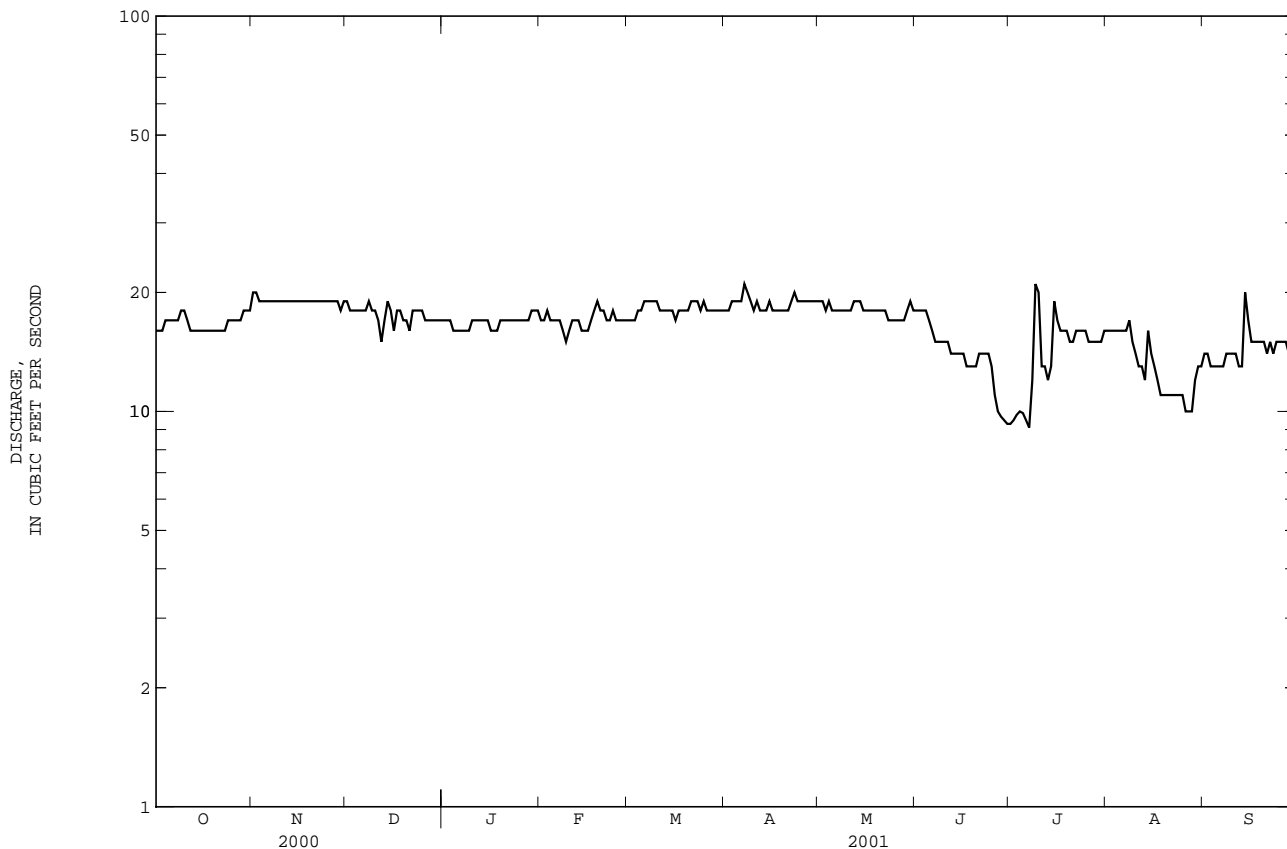
MEAN	13.3	13.5	13.3	13.0	13.4	14.8	13.8	11.4	11.7	11.7	12.1	12.9
MAX	18.9	19.0	18.1	17.6	17.6	21.3	19.4	18.5	17.8	17.0	20.9	20.0
(WY)	2000	2001	2000	2000	2000	1996	2000	2000	1999	1999	1999	1999
MIN	9.40	9.74	10.2	9.52	10.6	10.8	9.53	6.45	5.92	8.24	6.33	8.89
(WY)	1982	1994	1993	1980	1993	1993	1981	1992	1992	1981	1992	1991

06392950 STOCKADE BEAVER CREEK NEAR NEWCASTLE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1975 - 2001	
ANNUAL TOTAL	6304		6011.6		--	
ANNUAL MEAN	17.2		16.5		13.0	
HIGHEST ANNUAL MEAN	--		--		17.4	
LOWEST ANNUAL MEAN	--		--		9.80	
HIGHEST DAILY MEAN	21	Many days	21	Apr 7, Jul 9	143	Jul 16 1993
LOWEST DAILY MEAN	13	Jun 10	9.1	Jul 7	3.9	May 21 1992
ANNUAL SEVEN-DAY MINIMUM	13	Aug 18	9.6	Jun 27	4.6	Aug 2 1992
MAXIMUM PEAK FLOW	--		50		776 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		7.35		12.44	
ANNUAL RUNOFF (AC-FT)	12500		11920		9390	
10 PERCENT EXCEEDS	19		19		17	
50 PERCENT EXCEEDS	17		17		12	
90 PERCENT EXCEEDS	14		13		8.9	

a From rating curve extended above 18 ft<sup>3</sup>/s on basis of culvert backwater computation.

e Estimated.



## CHEYENNE RIVER BASIN

06395000 CHEYENNE RIVER AT EDMONT, SD

LOCATION.--Lat 43°18'20", long 103°49'14", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.36, T.8 S., R.2 E., Fall River County, Hydrologic Unit 10120106, on right bank at downstream side of bridge on U.S. Highway 18, at Edgemont, 300 ft downstream from Burlington Northern Railroad bridge, and 600 ft upstream from Cottonwood Creek.

DRAINAGE AREA.--7,143 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1903 to November 1906 (no winter records), April 1928 to February 1933 (monthly discharge only), October 1946 to current year.

REVISED RECORDS.--WSP 1086: Drainage area. WSP 1116: 1947. WDR SD-78-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 3,414.56 ft above sea level. Prior to Dec. 1, 1906, nonrecording gage 20 ft upstream at datum 0.7 ft lower. Apr. 11, 1928, to Feb. 28, 1933, Oct. 4, 1946, to Oct. 23, 1947, and Jan. 11, 1961, to Apr. 24, 1963, nonrecording gage, and Oct. 24, 1947, to Jan. 10, 1961, and Apr. 25, 1963, to Sept. 30, 1972, water-stage recorder all at present site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Many small reservoirs upstream from station used for stock and irrigation water, total capacity, about 45,000 acre-ft. U.S. Bureau of Reclamation satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	31	e17	e10	e14.5	e190	55	37	409	2.7	16	4.9
2	15	42	e17	e11	e14.5	e180	61	34	160	1.9	15	4.0
3	11	40	e17	e13	e14.5	e220	66	34	99	2.3	15	4.6
4	15	33	e17	e17	e15	e180	74	38	83	2.0	12	5.8
5	23	40	e17	e19	e15.5	e160	68	34	78	.96	10	4.2
6	22	23	e17	e20	e15	e300	62	32	85	.75	8.5	3.7
7	22	e20	e20	e20	e15	e310	59	31	670	3.1	7.2	4.4
8	21	e18	e20	e20	e14.5	e300	70	25	641	15	6.4	3.9
9	21	e17	e20	e22	e14.5	e350	204	27	226	124	5.7	3.4
10	22	e14	e19	e25	e14	e350	357	26	144	346	3.9	3.5
11	24	e12	e17	e25	e14	e300	213	23	106	680	3.4	3.8
12	25	e10	e16	e25	e13.5	e285	141	25	84	877	3.9	3.8
13	24	e9.0	e15	e25	e13.5	e270	93	22	72	694	4.0	4.7
14	23	e9.0	e14	e25	e13.5	e239	67	17	62	358	9.4	4.7
15	21	e10	e13	e23	e13.0	204	53	18	48	197	5.1	4.1
16	20	e10	e13	e22	e13.0	177	46	18	72	125	4.4	2.6
17	20	e10	e12	e21	e13	203	40	19	91	104	11	2.8
18	21	e12	e11	e20	e12.5	184	41	17	69	69	8.8	4.5
19	21	e14	e10	e20	e12.5	140	37	21	54	63	6.4	4.7
20	21	e11	e10	e19	e12.5	139	24	18	45	69	4.9	4.0
21	21	e12	e10	e18	e12.5	185	19	19	34	61	4.1	3.9
22	21	e12	e10	e18	e12.5	203	33	16	28	46	5.5	3.5
23	21	e13	e10	e17.5	e12.5	176	42	17	23	41	6.3	2.5
24	21	e14	e10	e17	e12.5	151	62	13	20	37	3.3	2.1
25	22	e14	e10	e16.5	e30	163	84	11	17	32	2.6	2.3
26	22	e15	e10	e16	e100	181	62	11	11	52	3.0	3.0
27	20	e16	e10	e15.5	e300	133	68	11	9.6	61	4.2	3.0
28	18	e17	e10	e15	e240	97	68	11	6.5	41	4.6	3.1
29	21	e17	e10	e15	---	74	50	11	4.8	31	4.2	2.8
30	21	e17	e10	e15	---	69	40	9.8	3.5	25	3.7	3.0
31	21	---	e10	e14.5	---	66	---	100	---	19	4.9	---
TOTAL	631	532.0	422	580.0	998.0	6179	2359	745.8	3455.4	4180.71	207.4	111.3
MEAN	20.4	17.7	13.6	18.7	35.6	199	78.6	24.1	115	135	6.69	3.71
MAX	25	42	20	25	300	350	357	100	670	877	16	5.8
MIN	10	9.0	10	10	12	66	19	9.8	3.5	.75	2.6	2.1
AC-FT	1250	1060	837	1150	1980	12260	4680	1480	6850	8290	411	221

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2001, BY WATER YEAR (WY)

	MEAN	22.1	16.7	8.99	8.92	42.1	123	68.3	213	252	125	66.6	26.4
MAX	291	266	50.5	37.3	302	506	558	2192	2084	806	388	275	
(WY)	1999	1999	1999	1999	1997	1994	1955	1978	1962	1958	1955	1973	
MIN	.000	.023	.000	.000	.000	3.39	.22	.27	1.76	.15	.000	.000	
(WY)	1961	1962	1960	1950	1960	1961	1961	1960	1966	1985	1960	1956	

## 06395000 CHEYENNE RIVER AT EDMONT, SD--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1929-1932, 1947-2001
ANNUAL TOTAL	15028.41	20401.61	--
ANNUAL MEAN	41.1	55.9	81.3 <sup>a</sup>
HIGHEST ANNUAL MEAN	--	--	434
LOWEST ANNUAL MEAN	--	--	12.0
HIGHEST DAILY MEAN	1160 Apr 20	877 Jul 12	24000 May 20 1978
LOWEST DAILY MEAN	.66 Aug 26	.75 Jul 6	.00 <sup>b</sup> Many days, most years
ANNUAL SEVEN-DAY MINIMUM	.77 Aug 20	2.0 Jul 1	.00 Many years
MAXIMUM PEAK FLOW	--	1070 Jun 7	28000 May 20 1978
MAXIMUM PEAK STAGE	--	4.88 Jun 7	13.65 <sup>c</sup> May 20 1978
ANNUAL RUNOFF (AC-FT)	29810	40470	58900 <sup>d</sup>
10 PERCENT EXCEEDS	71	168	155 <sup>d</sup>
50 PERCENT EXCEEDS	20	18	12 <sup>d</sup>
90 PERCENT EXCEEDS	3.7	4.1	.10 <sup>d</sup>

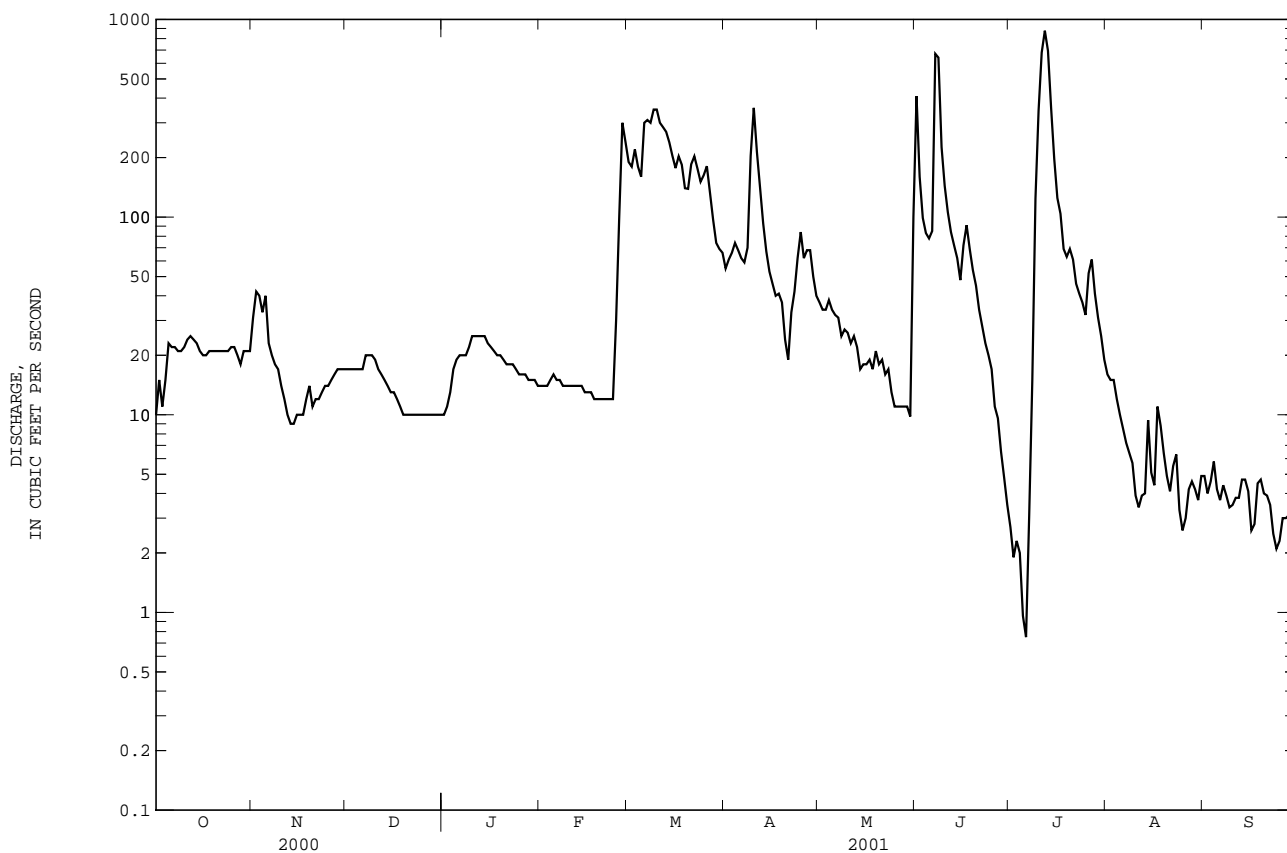
a Median of annual mean discharge, 72 ft<sup>3</sup>/s.

b No flow at times in most years.

c Flood of May 12, 1920 reached a stage of 13.0 ft and May 1, 1922, 14.0 ft present datum, from floodmarks at railroad bridge.

d Reflects water years 1947-2001 only.

e Estimated.



## CHEYENNE RIVER BASIN

06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY

LOCATION.--Lat 43°59'04", long 105°23'16", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.9, T.46 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 200 ft downstream from bridge on county road, 1.2 mi downstream from Rattlesnake Creek, 10.0 mi southwest of Piney, 15.5 mi north of Reno Junction, and 22 mi south of Gillette.

DRAINAGE AREA.--495 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1975 to April 1983, March to September 2001.

REVISED RECORD.--WDR WY-78-1.

GAGE.--Water-stage recorder and metal v-notch weir. Elevation of gage is 4,540 ft, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station. Several small stockwater reservoirs upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	e8.6	6.8	4.2	3.0	.82	.51	.00
2	---	---	---	---	---	e8.0	6.8	3.8	3.1	.68	.26	.00
3	---	---	---	---	---	e8.6	7.3	3.7	3.5	.74	.27	.00
4	---	---	---	---	---	e9.0	8.1	3.8	3.6	.71	.25	.00
5	---	---	---	---	---	e9.6	7.5	3.9	3.7	.86	.21	.00
6	---	---	---	---	---	e10	6.9	4.1	4.0	.88	.14	.00
7	---	---	---	---	---	11	6.9	4.0	4.0	.84	.13	.03
8	---	---	---	---	---	12	7.0	3.9	3.9	.89	.13	.16
9	---	---	---	---	---	12	6.7	3.8	3.7	.89	.10	.18
10	---	---	---	---	---	11	6.2	3.8	3.3	1.2	.10	.22
11	---	---	---	---	---	10	5.5	4.0	2.9	1.5	.09	.24
12	---	---	---	---	---	10	5.2	3.9	3.6	1.5	.08	.32
13	---	---	---	---	---	9.8	4.9	3.9	5.2	1.6	.07	.36
14	---	---	---	---	---	9.3	4.9	4.5	5.5	1.5	.07	.37
15	---	---	---	---	---	9.2	4.9	4.9	7.0	2.0	.06	.43
16	---	---	---	---	---	9.3	4.6	5.5	7.2	6.1	.04	.42
17	---	---	---	---	---	9.1	4.6	5.1	6.0	6.0	.04	.45
18	---	---	---	---	---	8.9	4.4	4.3	4.8	5.0	.03	.54
19	---	---	---	---	---	8.7	4.4	4.2	4.0	4.0	.05	.59
20	---	---	---	---	---	9.0	4.5	4.0	3.6	3.3	.05	.96
21	---	---	---	---	---	8.9	4.7	4.4	3.3	2.5	.04	2.6
22	---	---	---	---	---	8.4	5.4	3.8	3.0	1.5	.04	5.3
23	---	---	---	---	---	7.9	5.5	3.7	2.7	1.7	.04	4.4
24	---	---	---	---	---	7.9	5.5	3.4	2.5	1.5	.03	3.3
25	---	---	---	---	---	7.5	5.3	3.3	2.5	1.2	.03	4.5
26	---	---	---	---	---	7.3	5.1	3.2	2.0	1.1	.02	3.3
27	---	---	---	---	---	7.1	4.9	3.2	1.8	.93	.02	1.7
28	---	---	---	---	---	7.1	4.7	2.9	1.5	.78	.01	.89
29	---	---	---	---	---	7.1	4.6	2.8	1.3	.62	.00	.59
30	---	---	---	---	---	7.0	4.9	2.9	.99	.48	.00	.49
31	---	---	---	---	---	7.0	---	2.9	---	.54	.00	---
TOTAL	---	---	---	---	---	276.3	168.7	119.8	107.19	53.86	2.91	32.34
MEAN	---	---	---	---	---	8.91	5.62	3.86	3.57	1.74	.094	1.08
MAX	---	---	---	---	---	12	8.1	5.5	7.2	6.1	.51	5.3
MIN	---	---	---	---	---	7.0	4.4	2.8	.99	.48	.00	.00
AC-FT	---	---	---	---	---	548	335	238	213	107	5.8	64

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2001, BY WATER YEAR (WY)\*

MEAN	.12	.11	.22	.43	1.60	4.46	1.74	11.8	4.47	1.88	2.47	.47
MAX	.94	.61	.68	2.61	7.36	15.8	5.62	88.3	15.6	6.22	15.8	2.71
(WY)	1983	1983	1983	1983	1982	1978	2001	1978	1979	1982	1982	1982
MIN	.000	.000	.000	.000	.000	.051	.010	.000	.000	.000	.000	.000
(WY)	1976	1976	1982	1977	1978	1981	1981	1981	1981	1976	1976	1976



06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1976 - 2001\*

ANNUAL MEAN	--	2.52	
HIGHEST ANNUAL MEAN	--	9.76	1978
LOWEST ANNUAL MEAN	--	.19	1976
HIGHEST DAILY MEAN	12	Mar 8,9	1060 May 19 1978
LOWEST DAILY MEAN	.00	Several days	.00 Many days, several years
ANNUAL SEVEN-DAY MINIMUM			.00 Several years
MAXIMUM PEAK FLOW	14 <sup>a</sup>	Aug 29	4100 <sup>b</sup>
MAXIMUM PEAK STAGE	1.78 <sup>c</sup>	Mar 8	11.33 <sup>d</sup> May 18 1978
ANNUAL RUNOFF (AC-FT)	--	Mar 2	1830 May 18 1978
10 PERCENT EXCEEDS	--		4.0
50 PERCENT EXCEEDS	--		.03
90 PERCENT EXCEEDS	--		.00

\* For period of operation.

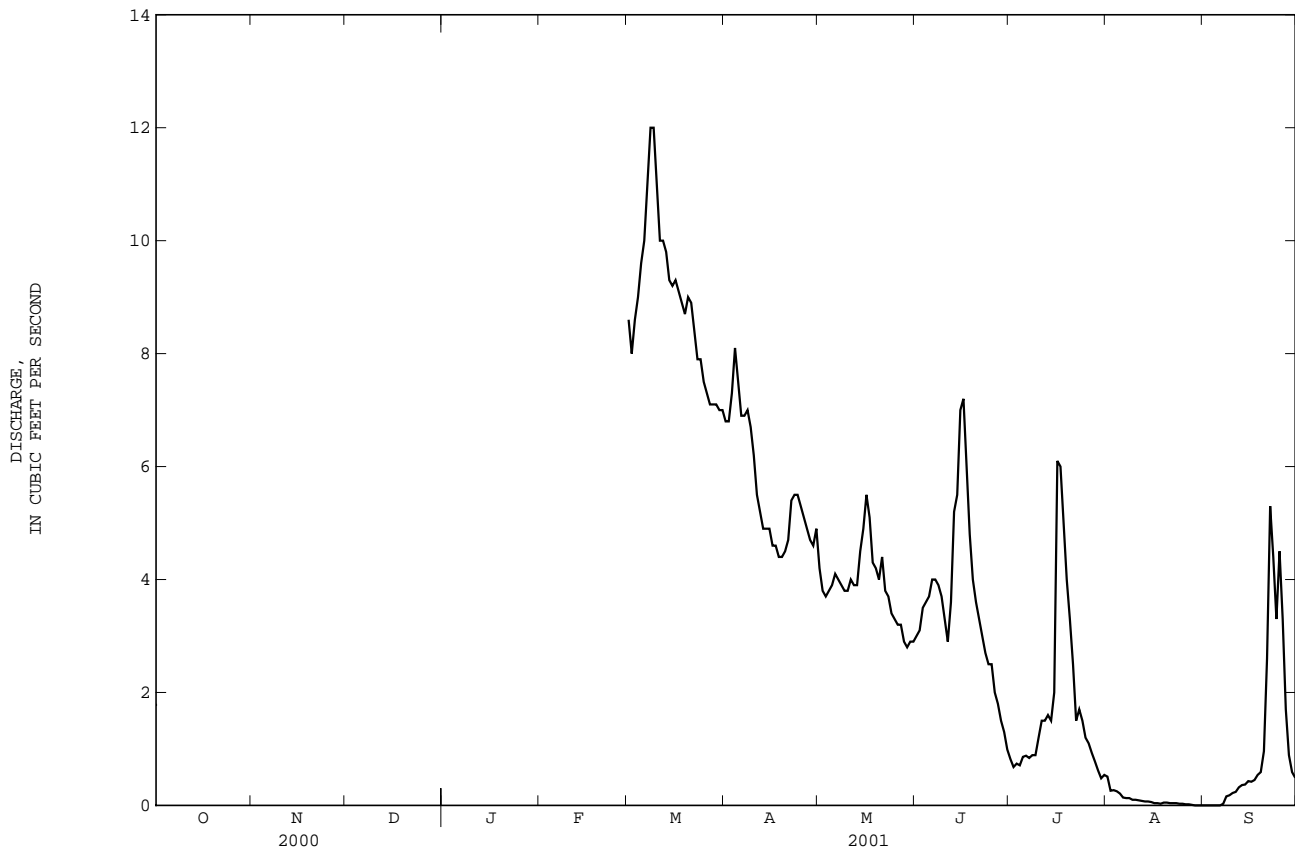
a Gage height, 1.58 ft.

b From rating curve extended above 1,200 ft<sup>3</sup>/s on basis of flow over road and culvert computations.

c Backwater from ice.

d From floodmarks.

e Estimated.



06425720 BELLE FOURCHE RIVER BELOW RATTLESNAKE CREEK, NEAR PINEY, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-83, March to September 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST.	BARO-METRIC PRES-		OXYGEN, DIS-SOLVED	PH WATER WHOLE FIELD	SPE-CIFIC CON-DUCT-ANCE	TEMPER-ATURE AIR	TEMPER-ATURE WATER	HARD-NESS TOTAL	CALCIUM DIS-SOLVED	MAGNE-SIUM, DIS-SOLVED	POTAS-SIUM, DIS-SOLVED	
		CUBIC FEET PER SECOND	SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	(PER-CENT SATUR-ATION)	(STAND-ARD UNITS)	(US/CM)	(DEG C)	(DEG C)	(MG/L AS CACO3)	(MG/L AS CA)	(MG/L AS MG)	(MG/L AS K)	
		(00061)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00900)	(00915)	(00925)	(00935)	
MAR	15...	1000	9.3	649	7.9	64	7.7	1680	-2.5	.00	580	111	74.2	9.21
MAY	07...	1115	4.2	652	9.2	97	8.0	2700	13.0	10.0	980	176	131	12.3
JUN	05...	1130	3.9	643	9.9	110	8.0	2720	16.5	12.0	940	157	132	11.3
JUL	10...	1130	.99	650	7.3	101	7.9	2450	24.0	23.0	700	91.1	115	11.2
AUG	13...	1100	.06	652	9.4	127	8.4	3100	29.0	22.0	930	78.3	177	19.5
SEP	10...	1730	.21	--	--	--	8.6	4200	17.0	19.0	1400	143	254	23.9

DATE	SODIUM		ALKA-	CHLO-	FLUO-	SILICA,		SOLIDS,	SOLIDS,	SOLIDS,	SOLIDS,		
	AD-SORP-	SODIUM,	LINITY	RIDE,	RIDE,	DIS-	SULFATE	DIS-	DIS-	RESIDUE	SUM OF	BARIUM,	IRON,
	TION	DIS-	WAT.DIS	DIS-	DIS-	SOLVED	DIS-	SOLVED	SOLVED	AT 180	CONSTI-	TOTAL	DIS-
	RATIO	SOLVED	FET	SOLVED	SOLVED	(MG/L	(MG/L	(TONS	(TONS	DEG. C	TUENTS,	RECOV-	SOLVED
	(MG/L	(MG/L	CAC03	(MG/L	(MG/L	AS	(MG/L	PER	PER	SOLVED	SOLVED	(UG/L	(UG/L
	AS NA)	(MG/L)	(MAG3	AS CL)	AS F)	SIO2)	AS SO4)	AC-FT)	DAY)	(MG/L)	(MG/L)	AS BA)	AS FE)
	(00931)	(00930)	(29801)	(00940)	(00950)	(00955)	(00945)	(70303)	(70302)	(70300)	(70301)	(01007)	(01046)
MAR 15...	3	173	269	10.3	.6	3.5	677	1.80	33.1	1320	1220	77.0	50
MAY 07...	4	277	373	15.7	.7	3.0	1210	3.19	26.5	2340	2050	72.3	<30
JUN 05...	4	305	333	15.5	.9	1.1	1230	3.02	23.1	2220	2050	59.6	<30
JUL 10...	5	312	244	16.2	.8	1.6	1070	2.53	4.97	1860	1770	48.4	<30
AUG 13...	5	383	377	28.4	1.0	1.2	1410	3.35	.40	2460	2320	19.0	30
SEP 10...	7	561	365	36.5	1.0	.7	2230	5.13	2.14	3770	3470	48.2	<30

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
MAR 15...	133
MAY 07...	346
JUN 05...	52.1
JUL 10...	111
AUG 13...	440
SEP 10...	95.8

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY

LOCATION.--Lat 44°04'48", long 105°15'59", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.4, T.47 N., R.70 W., Campbell County, Hydrologic Unit 10120201, 0.1 mi downstream from bridge on county road, 0.7 mi southwest of Piney, 1.3 mi upstream from mouth, and 18 mi southeast of Gillette.

PERIOD OF RECORD.--Water years 1978-80, 1982, 1983, 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
DEC 12...	1005	1.6	650	9.0	73	7.6	2310	-15.0	.00	550	103	72.2	14.1	
JAN 10...	1125	1.8	--	9.5	--	7.8	1750	1.0	.00	380	69.9	49.1	11.0	
FEB 15...	1350	1.9	--	--	--	7.8	1500	-6.0	.00	330	64.3	41.4	9.20	
MAR 15...	0815	5.2	654	8.8	71	7.6	1540	-2.0	.00	480	86.7	65.0	9.96	
APR 12...	1445	7.4	646	11.5	120	7.9	2120	16.0	9.5	680	125	89.8	13.2	
MAY 09...	0730	6.7	650	7.7	83	8.1	1840	14.0	11.5	390	64.2	56.8	10.1	
JUN 06...	1235	3.6	652	9.2	115	8.2	1890	18.0	18.0	420	69.1	59.7	10.5	
JUL 11...	0850	4.7	650	3.9	52	7.7	1630	24.0	21.5	310	47.7	46.8	10.7	
AUG 14...	0720	2.0	653	4.6	58	8.1	1560	19.5	18.5	230	33.4	36.6	11.9	
SEP 10...	1900	2.6	--	--	--	8.8	1430	20.0	18.0	230	35.5	35.1	11.1	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
DEC 12...	6	342	526	21.8	1.0	6.7	783	2.33	7.39	1710	1660	<2.0	44.5	
JAN 10...	6	248	458	18.0	1.1	6.2	510	1.70	6.08	1250	1190	<2.0	78.6	
FEB 15...	5	210	417	13.3	1.0	5.6	379	1.40	5.26	1030	974	<2.0	109	
MAR 15...	3	159	205	16.8	.5	4.3	616	1.63	16.8	1200	1080	<2.0	68.1	
APR 12...	4	244	326	37.2	.8	2.1	839	2.33	34.1	1710	1550	<2.0	58.2	
MAY 09...	6	259	389	18.5	1.0	1.2	596	1.83	24.3	1350	1240	E1.0	53.7	
JUN 06...	6	264	387	20.0	1.0	2.1	601	1.77	12.7	1300	1260	<2.0	64.6	
JUL 11...	6	250	375	14.1	.9	6.2	460	1.49	13.9	1100	1060	2.0	75.4	
AUG 14...	8	265	415	17.2	1.1	3.1	400	1.41	5.59	1040	1020	2.1	106	
SEP 10...	7	240	422	16.1	1.1	1.5	339	1.25	6.47	922	932	E1.4	74.3	

## CHEYENNE RIVER BASIN

06425900 CABALLO CREEK AT MOUTH, NEAR PINEY, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
DEC 12...	<30	98.7
JAN 10...	M	74.5
FEB 15...	M	81.9
MAR 15...	60	329
APR 12...	<30	185
MAY 09...	10	179
JUN 06...	<10	164
JUL 11...	M	72.0
AUG 14...	M	58.7
SEP 10...	<10	11.3

E -- Estimated value.

M -- Presence verified, not quantified.

LOCATION.--Lat 44°16'04", long 105°26'17", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 31, T.50 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 0.2 mi upstream from mouth and 3.0 mi southeast of Gillette.

PERIOD OF RECORD.--July 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4460 ft above sea level, from topographic map.

REMARKS.--Records excellent except those for daily discharges greater than .00 ft<sup>3</sup>/s, which are fair and those for May 28-31, and those for estimated daily discharges, which are poor. Natural flow of stream affected by numerous small reservoirs and diversions for irrigation and coalbed methane production water.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.55	e.60	e.50	e.30	e1.3	.97	.25	7.2	.43	.00	.00
2	.02	.83	e.50	e.60	e.80	e1.5	.95	.23	4.8	.31	.00	.00
3	.02	1.7	.44	e.80	e.60	e2.5	1.4	.20	3.4	.32	.00	.00
4	.02	1.1	.82	e1.2	e1.0	e3.5	8.9	.18	7.7	4.3	.00	.00
5	.02	e.60	.65	e.90	e.60	e8.0	e20	.18	13	1.8	.00	.00
6	.03	e.40	.48	e.70	e.40	e15	e10	.24	6.0	.85	.00	.00
7	.04	e.60	.42	e.50	e.30	e12	e7.0	.31	3.9	.55	.00	.00
8	.04	e.40	.45	e.40	e.25	e11	e5.0	.83	2.8	e.30	.00	.00
9	.08	e.30	e.40	e.60	e.20	e9.0	e4.0	.53	2.3	e.20	.00	.00
10	.20	e.25	e.25	e.90	e.30	e7.0	e3.0	.38	2.1	e.10	.00	.00
11	.34	e.20	e.10	e.70	e.40	e5.0	e2.0	.35	1.4	e.75	.00	.00
12	1.3	e.30	e.15	e1.0	e.80	4.2	1.7	1.0	1.1	e.40	.00	.00
13	1.1	e.50	e.30	e.70	e.60	4.5	1.2	.40	9.6	e.20	.00	.00
14	.59	e.50	e.50	e.50	e.40	4.6	e1.0	.13	8.6	e.08	.00	.00
15	.35	e.40	e.40	e.40	e.50	3.3	e.90	.10	9.3	e.03	.00	.00
16	.27	e.30	e.30	e.30	e.30	4.0	e.80	.11	4.3	e.01	.00	.00
17	.66	e.25	e.20	e.60	e.50	4.2	e.70	.08	2.4	.00	.00	.00
18	.73	e.20	e.15	e.50	e.70	3.4	.65	.04	1.4	.00	.00	.00
19	.43	e.30	e.25	e.50	e.50	2.9	.55	.03	1.4	.00	.00	.00
20	.24	.30	e.40	e.30	e.40	2.5	.54	.02	1.0	.00	.00	.00
21	.20	.25	e.20	e.50	e.60	2.4	3.2	.03	.75	.00	.00	.00
22	.25	.19	e.15	e.60	e.80	2.4	3.5	.04	.77	.00	.00	.00
23	.22	.25	e.30	e1.0	e.70	1.8	4.4	.12	.78	.00	.00	.00
24	.20	e.40	e.25	e1.5	e.60	1.6	2.4	.19	.56	.00	.00	.00
25	.20	e.70	.40	e1.3	e1.0	1.3	1.7	.13	.43	.00	.00	.00
26	.26	e.60	.65	e1.0	e.70	1.1	1.2	.11	.36	.00	.00	.00
27	.78	e.70	.77	e.50	e.50	1.1	.81	.10	.32	.00	.00	.00
28	.53	e.60	e.70	e.30	e1.0	1.1	.55	92	.65	.00	.00	.00
29	.47	e.40	e.40	e1.0	---	1.0	.38	442	2.2	.00	.00	.00
30	.45	e.50	e.30	e.50	---	.85	.33	30	.82	.00	.00	.00
31	.44	---	e.40	e.40	---	.87	---	13	---	.00	.00	---
TOTAL	10.51	14.57	12.28	21.20	15.75	124.92	89.73	583.31	101.34	10.63	0.00	0.00
MEAN	.34	.49	.40	.68	.56	4.03	2.99	18.8	3.38	.34	.000	.0000
MAX	1.3	1.7	.82	1.5	1.0	15	20	442	13	4.3	.00	.00
MIN	.02	.19	.10	.30	.20	.85	.33	.02	.32	.00	.00	.00
AC-FT	21	29	24	42	31	248	178	1160	201	21	.00	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

[illegible]

## CHEYENNE RIVER BASIN

06426130 DONKEY CREEK NEAR GILLETTE, WY--Continued

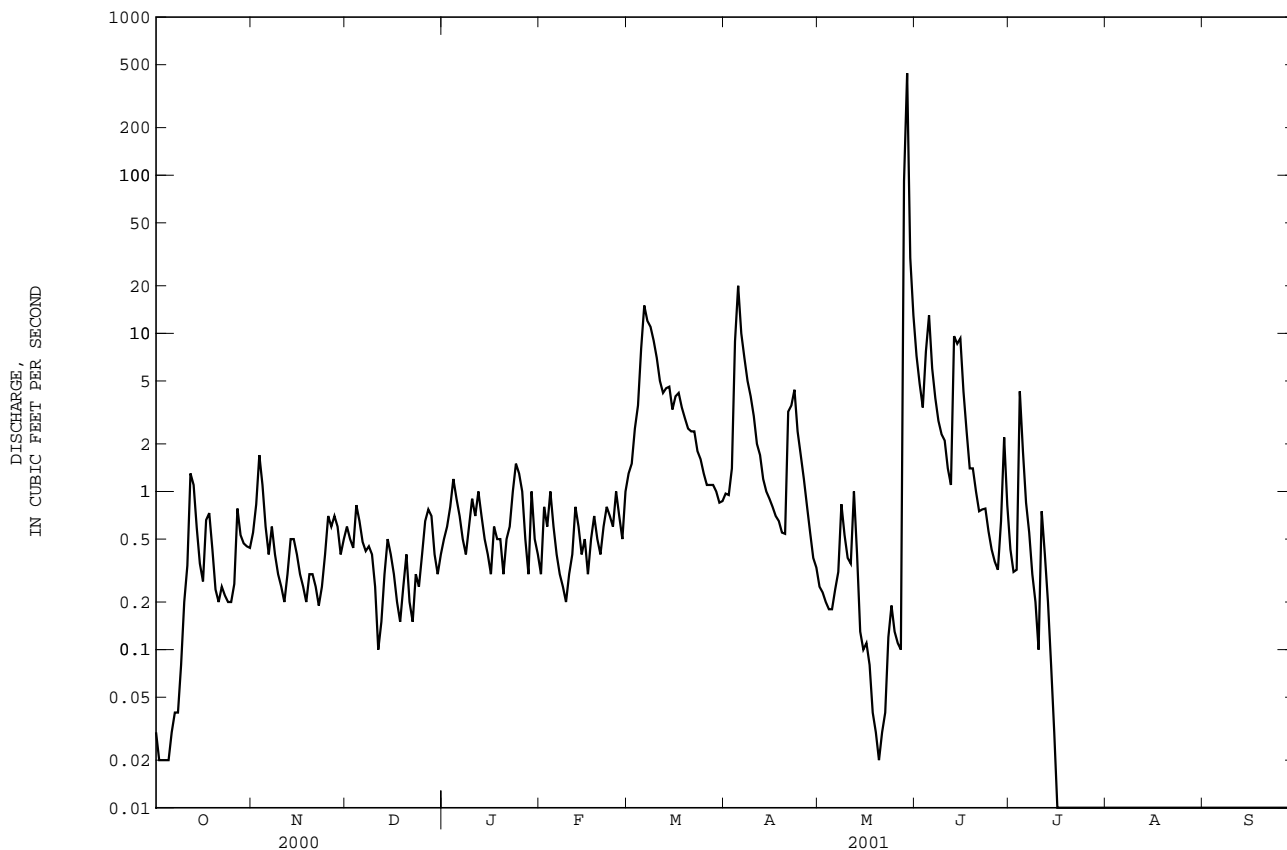
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*	FOR 2001 WATER YEAR	WATER YEARS 2000 - 2001
ANNUAL TOTAL	--	984.24	--
ANNUAL MEAN	--	2.70	2.70
HIGHEST ANNUAL MEAN	--	--	2.70 2001
LOWEST ANNUAL MEAN	--	--	2.70 2001
HIGHEST DAILY MEAN	1.7 Nov 3	442 May 29	442 May 29 2001
LOWEST DAILY MEAN	.00 Many days	.00 Many days	.00 Many days, most years
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 10	.00 Jul 17	.00 Most years
MAXIMUM PEAK FLOW	--	3400 <sup>a</sup> May 28	3400 <sup>a</sup> May 28 2001
MAXIMUM PEAK STAGE	--	10.89 <sup>b</sup> May 28	10.89 <sup>b</sup> May 28 2001
ANNUAL RUNOFF (AC-FT)	--	1950	1950
10 PERCENT EXCEEDS	--	3.4	2.5
50 PERCENT EXCEEDS	--	.40	.30
90 PERCENT EXCEEDS	--	.00	.00

\* For period of operation.

a From rating curve extended above 150 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.



LOCATION.--Lat 44°16'04", lng 105°26'17", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 31. T.50 N., R.71 W., Campbell County, Hydrologic Unit 10120201, on right bank 0.2 mi upstream from mouth and 3.0 mi southeast of Gillette.

PERIOD OF RECORD.--July 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4460 ft above sea level, from topographic map.

REMARKS.--Records fair except those for May 28-30, and those for estimated daily discharges, which are poor. Natural flow of stream affected by City of Gillette Wastewater Treatment Facility. U.S. Geological Survey data collection platform with satellite telemetry at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	9.0	3.3	3.1	3.2	2.7	5.4	3.0	3.7	3.1	3.0	2.4
2	3.2	3.7	3.5	3.2	3.4	2.8	4.9	2.9	3.5	3.2	2.7	2.0
3	e3.0	3.1	3.6	3.2	3.6	2.8	6.8	2.7	4.9	6.4	3.0	2.0
4	e2.8	3.2	3.6	3.5	3.6	4.7	15	2.6	12	3.7	2.7	1.8
5	e2.6	3.2	3.5	3.6	3.1	9.5	17	2.6	9.0	3.1	3.0	1.4
6	2.5	3.3	3.4	3.6	2.6	11	6.0	4.2	4.2	2.7	3.0	1.8
7	2.2	3.9	3.4	3.7	2.6	11	5.9	3.3	3.7	3.6	3.1	1.4
8	3.1	2.7	3.5	3.8	2.7	11	5.1	2.8	3.6	3.0	3.3	1.9
9	2.9	3.1	3.7	3.8	2.8	9.7	4.9	2.9	3.6	3.1	3.0	2.5
10	3.0	3.1	3.8	3.7	2.7	e8.0	5.6	4.5	3.5	6.7	3.3	1.9
11	2.8	3.1	3.7	3.6	3.2	e7.0	e4.5	4.0	3.6	4.8	2.8	1.6
12	2.9	3.1	3.6	3.6	2.8	e6.0	3.4	3.0	4.1	3.6	3.0	1.6
13	3.2	3.0	3.3	3.9	2.6	e6.0	2.5	2.7	17	2.8	3.1	1.8
14	4.6	2.9	3.3	3.8	2.5	5.0	2.6	2.9	7.8	2.8	3.1	1.2
15	3.1	2.9	3.5	3.9	2.5	3.9	2.2	2.6	5.2	12	3.1	1.7
16	2.9	2.9	3.4	3.5	2.4	4.8	2.6	3.5	3.1	3.3	2.9	2.0
17	2.6	3.1	3.4	3.5	2.6	4.3	2.3	2.8	3.4	2.7	2.8	2.0
18	2.9	3.1	3.3	3.5	2.7	3.9	2.8	2.5	3.6	2.7	2.4	2.0
19	2.7	3.0	3.2	3.5	2.9	3.7	2.9	2.8	3.4	2.7	2.6	1.9
20	2.7	3.0	3.2	3.6	2.9	3.6	3.8	3.0	3.4	2.7	2.8	2.1
21	2.7	2.9	3.2	3.8	2.9	3.7	11	3.7	3.5	2.4	3.2	2.4
22	2.9	2.8	3.0	3.6	2.5	3.9	7.4	3.1	3.3	2.5	3.0	3.0
23	3.1	2.6	2.9	3.7	2.5	3.6	4.2	3.0	3.1	2.8	3.2	2.9
24	2.5	2.7	3.0	3.5	2.7	4.3	3.1	2.7	3.0	3.2	3.3	3.2
25	3.2	3.0	2.6	3.4	2.9	4.9	2.9	2.3	3.1	3.1	3.3	2.9
26	3.2	3.2	3.1	3.4	2.8	5.6	2.8	2.0	3.3	2.7	2.7	2.6
27	3.0	3.4	3.2	3.5	3.0	5.6	2.7	1.8	3.3	2.8	3.3	2.7
28	3.1	3.3	3.3	3.4	3.2	5.1	2.4	54	5.5	2.5	3.3	2.5
29	3.1	3.3	3.3	3.4	---	5.0	2.9	192	3.7	2.7	3.6	2.4
30	3.3	3.2	3.3	3.2	---	4.8	2.9	7.0	3.1	3.0	3.2	2.8
31	3.0	---	3.1	3.4	---	5.8	---	5.4	---	2.7	2.8	---
TOTAL	91.9	98.8	103.2	109.9	79.9	173.7	148.5	338.3	141.2	109.1	93.6	64.4
MEAN	2.96	3.29	3.33	3.55	2.85	5.60	4.95	10.9	4.71	3.52	3.02	2.15
MAX	4.6	9.0	3.8	3.9	3.6	11	17	192	17	12	3.6	3.2
MIN	2.2	2.6	2.6	3.1	2.4	2.7	2.2	1.8	3.0	2.4	2.4	1.2
AC-FT	182	196	205	218	158	345	295	671	280	216	186	122

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

[illegible]

## CHEYENNE RIVER BASIN

06426160 STONEPILE CREEK AT MOUTH NEAR GILLETTE, WY--Continued

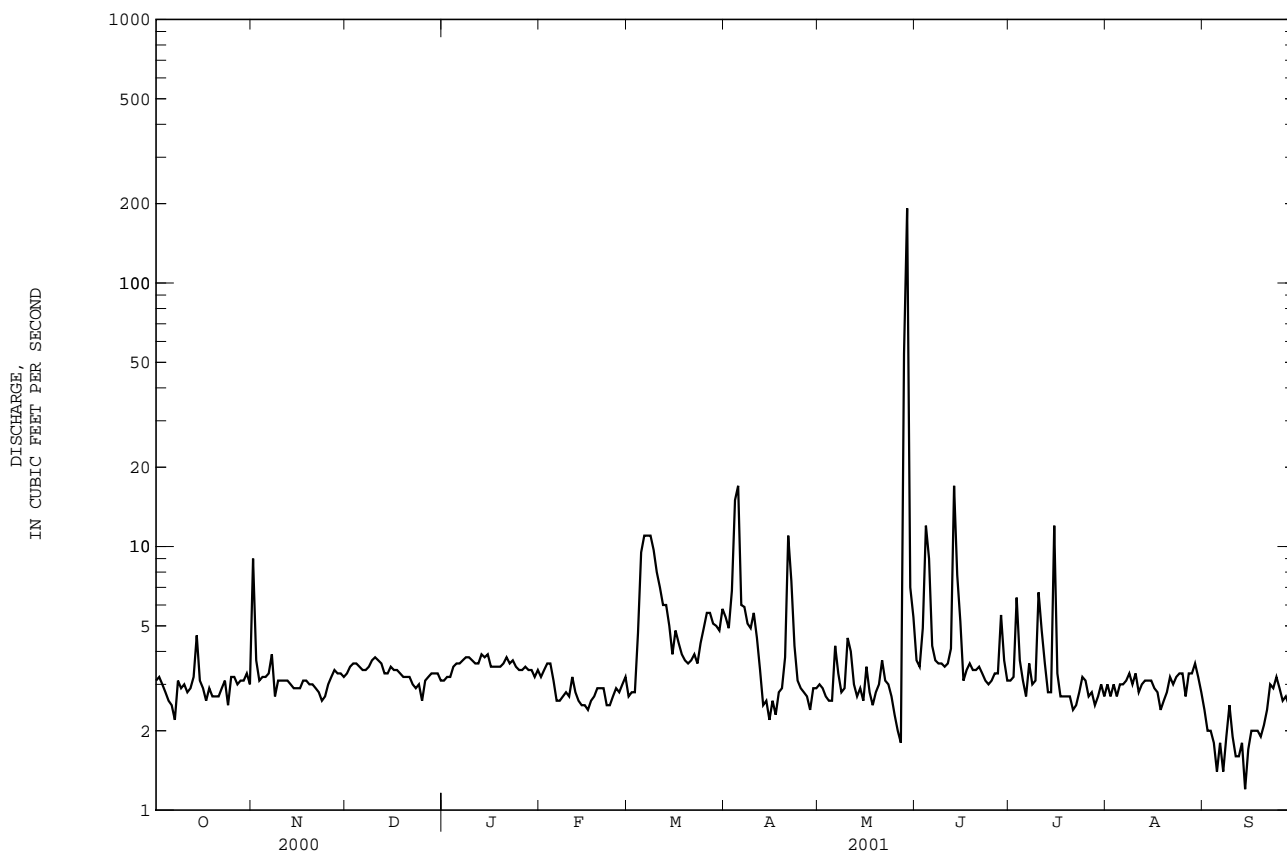
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*		FOR 2001 WATER YEAR		WATER YEARS 2000 - 2001	
ANNUAL TOTAL	--		1552.5		--	
ANNUAL MEAN	--		4.25		4.25	
HIGHEST ANNUAL MEAN	--		--		4.25	2001
LOWEST ANNUAL MEAN	--		--		4.25	2001
HIGHEST DAILY MEAN	9.0	Nov 1	192	May 29	192	May 29 2001
LOWEST DAILY MEAN	1.4	Sep 22	1.2	Sep 14	1.2	Sep 14 2001
ANNUAL SEVEN-DAY MINIMUM	2.4	Jul 6	1.7	Sep 10	1.7	Sep 10 2001
MAXIMUM PEAK FLOW	--		800 <sup>a</sup>	May 28	800 <sup>a</sup>	May 28 2001
MAXIMUM PEAK STAGE	--		9.14 <sup>b</sup>	May 28	9.14 <sup>b</sup>	May 28 2001
ANNUAL RUNOFF (AC-FT)	--		3080		3080	
10 PERCENT EXCEEDS	--		5.1		4.8	
50 PERCENT EXCEEDS	--		3.1		3.0	
90 PERCENT EXCEEDS	--		2.5		2.4	

\* For period of operation.

a From rating curve extended above 39 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b From floodmarks.

e Estimated.





06426400 DONKEY CREEK NEAR MOORCROFT, WY

LOCATION.--Lat 44°16'58", long 105°03'48", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.30, T.50 N., R.68 W., Crook County, Hydrologic Unit 10120201, 25 ft upstream from county bridge, 1.2 mi downstream from Well Creek, and 6.0 mi west of Moorcroft.

PERIOD OF RECORD.--Water years 1977-89, 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
NOV 15...	0750	.69	649	8.8	72	8.0	3240	-5.0	.00	1100	177	153	13.1
JAN 09...	1510	2.8	--	7.6	--	7.6	2980	--	.00	970	162	138	16.6
MAY 08...	0930	.90	659	13.2	139	8.6	3030	19.0	10.5	820	98.3	140	13.8
JUN 05...	1815	9.0	652	6.2	78	7.7	2240	18.5	18.0	870	145	123	16.7
JUL 10...	1730	4.6	655	8.9	135	8.4	2380	24.0	28.0	900	144	132	11.4
AUG 13...	1930	.20	659	6.0	82	8.2	4000	21.5	23.0	810	93.0	141	15.3
SEP 10...	1520	.16	--	--	--	8.6	2800	26.5	22.0	650	86.4	105	15.2

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)
NOV 15...	6	425	491	108	1.0	5.1	1380	3.81	5.22	2800	2550	E1.1	29.1
JAN 09...	5	326	371	204	1.2	13.5	1020	3.12	17.4	2300	2100	6.1	33.2
MAY 08...	6	378	235	158	1.1	2.3	1240	3.38	6.05	2490	2170	E1.8	27.3
JUN 05...	3	185	216	78.3	.8	14.0	940	2.50	44.7	1840	1630	E2.0	75.2
JUL 10...	3	206	240	124	1.1	.4	921	2.53	23.1	1860	1680	3.1	65.1
AUG 13...	10	635	483	133	1.5	.6	1610	4.15	1.65	3050	2920	5.1	46.2
SEP 10...	7	400	335	200	1.4	<.3	917	2.67	.85	1960	1930	3.3	38.1

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 15...	E20	656
JAN 09...	E20	289
MAY 08...	E20	254
JUN 05...	<30	453
JUL 10...	<30	215
AUG 13...	<30	179
SEP 10...	<30	250

E -- Estimated value.

## CHEYENNE RIVER BASIN

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY

LOCATION.--Lat 44°19'19", long 104°56'24", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.17, T.50 N., R.67 W., Crook County, Hydrologic Unit 10120201, on right bank 3.1 mi upstream from bridge on Highway 14, and 4.0 mi northeast of Moorcroft.

DRAINAGE AREA.--1,690 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1943 to September 1970, October 1975 to September 1983, October 1985 to September 1987, October 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,110 ft above sea level, from topographic map. Prior to Mar. 28, 1947, nonrecording gage, and Mar. 28, 1947, to Jan. 16, 1951, water-stage recorder at site 4 mi downstream at different datum. Jan. 17, 1951, to September 1970, water-stage recorder at site 7.9 mi upstream at different datum. September 1970 to Oct. 22, 1993, water-stage recorder at site 8.0 mi upstream at different datum.

REMARKS.--Records fair except those for Sept. 23-30, and those for estimated daily discharges, which are poor. Numerous small stockwater and soil conservation reservoirs upstream from station. Diversions for irrigation upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	e2.9	e4.0	e3.2	e4.2	e5.4	27	14	81	3.8	3.0	3.0
2	3.8	e2.9	e3.8	e3.4	e4.1	e5.6	27	15	39	4.4	4.3	2.7
3	3.8	e2.8	e3.6	e3.1	e3.9	e6.0	27	14	27	4.5	5.0	2.1
4	2.4	e2.4	e3.3	e2.9	e4.0	e6.6	28	15	27	4.9	3.2	1.9
5	2.1	e2.3	e3.6	e2.8	e4.1	e7.4	30	14	26	12	2.7	2.0
6	2.1	e2.1	e3.9	e2.8	e4.0	e8.6	38	14	90	13	2.5	2.0
7	2.0	e2.1	e3.7	e2.9	e4.2	e30	60	13	48	7.2	2.3	2.0
8	1.9	e2.2	e3.8	e3.1	e4.3	e115	141	12	36	6.7	2.4	2.4
9	1.8	e1.9	e3.9	e3.3	e4.4	e130	75	12	23	11	2.5	2.4
10	1.8	e1.7	e4.0	e3.9	e4.4	e110	45	12	11	42	2.6	2.4
11	1.6	e1.5	e3.9	e3.7	e4.4	e80	36	13	9.3	8.1	2.7	2.2
12	1.5	e1.6	e4.6	e3.5	e4.3	e74	29	12	11	5.8	3.9	2.0
13	1.3	e1.5	e4.1	e3.6	e4.2	e64	27	12	12	5.5	3.1	2.0
14	1.7	e1.4	e3.9	e3.8	e4.3	e56	24	14	74	5.2	2.6	2.1
15	1.4	e1.3	e3.4	e4.0	e4.4	e48	21	17	73	9.6	2.4	2.4
16	2.5	e1.5	e2.6	e4.1	e4.3	e38	17	13	74	8.0	2.2	2.8
17	5.5	e1.7	e2.5	e4.2	e4.1	e32	15	11	42	6.2	2.1	3.0
18	3.6	e1.9	e2.8	e4.0	e4.0	e26	15	10	28	4.2	2.1	2.8
19	3.0	e1.8	e3.2	e3.8	e4.2	e22	14	12	23	4.3	2.0	2.6
20	3.0	e1.8	e3.4	e3.7	e4.1	e20	16	11	20	6.0	1.8	2.6
21	2.8	e1.9	e3.4	e3.6	e4.1	e21	19	11	15	5.2	1.8	2.6
22	3.0	e2.1	e3.3	e3.5	e4.2	e22	18	10	9.4	5.1	1.8	2.6
23	3.3	e2.3	e3.4	e3.5	e5.4	e22	17	11	8.5	4.9	1.8	3.1
24	3.2	e2.5	e3.3	e3.6	e5.2	e23	23	10	10	4.5	1.7	3.1
25	3.3	e2.5	e3.1	e3.8	e5.0	e23	24	11	8.9	4.6	1.5	3.2
26	3.1	e2.8	e2.9	e3.7	e4.7	e26	22	10	7.6	6.1	2.0	3.1
27	3.1	e3.4	e2.8	e3.8	e4.8	31	20	9.7	6.1	6.6	2.0	3.5
28	2.9	e4.3	e3.0	e3.9	e5.0	31	14	10	4.7	4.5	1.9	2.4
29	3.1	e4.1	e3.0	e4.0	---	30	12	11	3.8	3.7	2.5	1.3
30	2.9	e4.0	e3.0	e4.7	---	29	12	9.5	3.6	3.4	3.7	1.4
31	3.0	---	e3.1	e4.4	---	28	---	91	---	3.2	3.2	---
TOTAL	82.1	69.2	106.3	112.3	122.3	1170.6	893	454.2	851.9	224.2	79.3	73.7
MEAN	2.65	2.31	3.43	3.62	4.37	37.8	29.8	14.7	28.4	7.23	2.56	2.46
MAX	5.5	4.3	4.6	4.7	5.4	130	141	91	90	42	5.0	3.5
MIN	1.3	1.3	2.5	2.8	3.9	5.4	12	9.5	3.6	3.2	1.5	1.3
AC-FT	163	137	211	223	243	2320	1770	901	1690	445	157	146

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2001, BY WATER YEAR (WY)

	MEAN	5.72	2.32	2.31	3.56	18.1	59.2	27.2	68.1	62.1	19.5	10.4	5.31
MAX	68.0	23.1	22.3	53.5	260	374	190	1057	509	72.5	57.3	63.5	
(WY)	1995	1999	1956	1997	1962	1978	1944	1978	1964	1948	1993	1951	
MIN	.000	.000	.000	.000	.000	.10	.000	.045	.097	.000	.000	.000	
(WY)	1944	1944	1944	1944	1944	1951	1961	1958	1966	1954	1944	1944	

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1944 - 2001	
ANNUAL TOTAL	2784.23		4239.1		--	
ANNUAL MEAN	7.61		11.6		23.7	
HIGHEST ANNUAL MEAN	--		--		136	
LOWEST ANNUAL MEAN	--		--		1.14	
HIGHEST DAILY MEAN	93	Jul 12	141	Apr 8	10300	May 19 1978
LOWEST DAILY MEAN	.00	Several days	1.3	Several days	.00	Several days, most years
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 4	1.5	Nov 10	.00	Most years
MAXIMUM PEAK FLOW	--		196 <sup>a</sup>	Apr 8	15300 <sup>b</sup>	May 19 1978
MAXIMUM PEAK STAGE	--		6.39 <sup>c</sup>	Mar 6	14.60 <sup>d</sup>	May 19 1978
ANNUAL RUNOFF (AC-FT)	5520		8410		17170	
10 PERCENT EXCEEDS	15		28		35	
50 PERCENT EXCEEDS	4.8		4.0		1.5	
90 PERCENT EXCEEDS	.47		2.0		.00	

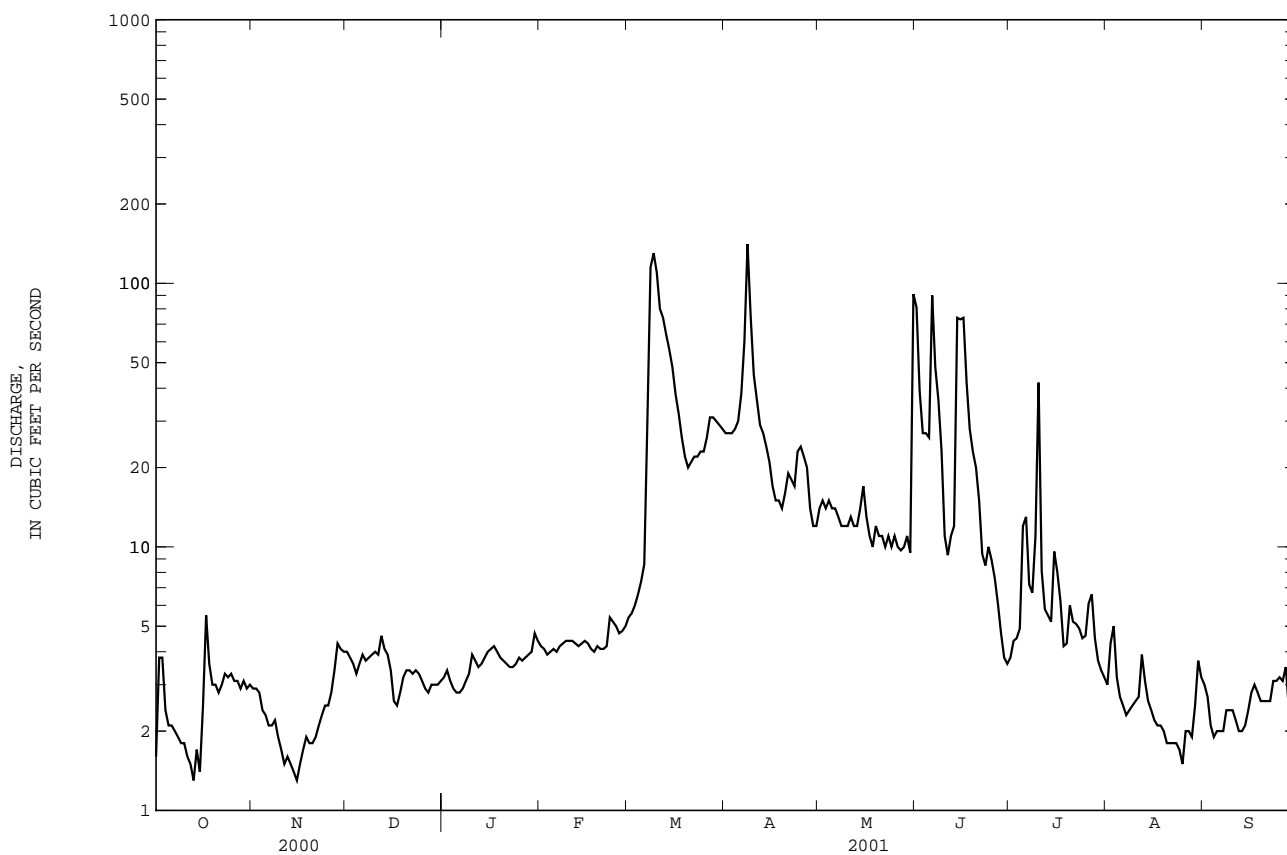
a Gage height, 5.29 ft.

b From rating curve extended above 11,000 ft<sup>3</sup>/s, site and datum then in use.

c Backwater from ice.

d From floodmarks in shelter, site and datum then in use.

e Estimated.



06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1947-57, 1975-93, October 1994 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	PH WATER WHOLE FIELD (STAND-ARD UNITS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	
		(00061)	(00025)	(00300)	(00301)	(00400)	(00095)	(00020)	(00010)	(00900)	(00915)	(00925)	(00935)	
OCT 25...	1135	3.4	655	13.1	132	8.4	2960	12.5	8.5	840	124	128	14.8	
NOV 15...	0920	1.3	651	9.8	80	7.8	3350	-0.5	.00	870	146	123	14.8	
DEC 12...	1245	5.0	675	6.4	50	7.4	3130	-6.0	.00	960	174	127	16.9	
JAN 09...	1330	3.3	--	6.7	--	7.7	3510	1.5	.00	1100	187	143	15.0	
FEB 15...	1030	4.4	--	--	--	7.6	3550	-9.0	.00	1100	214	138	13.9	
MAR 27...	1130	31	655	12.3	104	8.0	1910	4.0	2.0	620	119	78.4	10.7	
APR 12...	1215	29	654	9.7	90	8.0	1980	10.0	5.5	650	115	87.2	10.8	
MAY 08...	0800	12	661	8.5	87	8.1	2610	12.0	9.5	780	125	114	13.5	
JUN 05...	1630	24	654	7.3	88	7.9	2330	16.5	16.5	820	134	117	13.2	
JUL 10...	1615	35	652	6.1	84	7.8	816	28.5	23.5	200	38.4	25.2	8.23	
AUG 13...	1800	2.9	661	9.2	130	8.5	2450	29.0	25.0	440	57.1	71.6	20.6	
SEP 10...	1415	2.4	--	--	--	8.5	2500	29.0	19.0	420	51.0	71.2	14.2	
DATE		SODIUM AD-SORP-TION RATIO	SODIUM, DIS-SOLVED (MG/L AS NA)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
		(00931)	(00930)	(29801)	(00940)	(00950)	(00955)	(00945)	(70303)	(70302)	(70300)	(70301)	(00608)	(00631)
OCT 25...	5	356	267	163	1.0	<.3	1150	3.05	20.6	2240	2100	<.041	E.031	
NOV 15...	7	491	400	211	.9	2.6	1280	3.66	9.45	2690	2510	--	--	
DEC 12...	5	379	456	130	1.1	8.5	1160	3.33	33.0	2450	2270	--	--	
JAN 09...	6	430	497	137	1.1	11.0	1330	3.75	24.5	2760	2550	--	--	
FEB 15...	6	446	437	99.2	1.0	10.4	1500	4.01	35.1	2950	2680	--	--	
MAR 27...	3	191	261	48.0	.6	5.1	728	1.96	121	1440	1340	.381	.855	
APR 12...	4	214	274	43.9	.7	3.3	782	2.14	125	1580	1420	--	--	
MAY 08...	5	312	319	68.8	.9	2.3	1070	2.86	68.7	2100	1900	<.041	<.047	
JUN 05...	4	234	260	71.9	.8	8.0	961	2.60	124	1910	1700	--	--	
JUL 10...	3	82.0	95	20.1	.4	3.3	256	.72	49.7	526	490	--	--	
AUG 13...	8	389	369	76.4	1.0	.7	814	2.30	13.3	1690	1650	<.040	<.050	
SEP 10...	9	408	388	146	1.2	.3	725	2.31	10.8	1700	1650	--	--	

06426500 BELLE FOURCHE RIVER BELOW MOORCROFT, WY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
OCT								
25...	.033	<.018	--	420	<2.0	45.8	<30	52.2
NOV								
15...	--	--	--	--	E1.5	38.8	<30	91.8
DEC								
12...	--	--	--	--	2.2	33.2	<30	54.6
JAN								
09...	--	--	--	--	2.0	42.5	<30	88.7
FEB								
15...	--	--	--	--	E1.0	64.4	E20	116
MAR								
27...	.019	.077	52	70	<2.0	67.6	10	143
APR								
12...	--	--	--	--	E1.3	89.5	<30	94.7
MAY								
08...	E.004	<.018	160	200	<2.0	64.4	<30	14.3
JUN								
05...	--	--	--	--	E1.5	69.6	<30	242
JUL								
10...	--	--	--	--	<2.0	132	10	6.9
AUG								
13...	<.006	<.020	240	240	2.1	94.5	<10	24.3
SEP								
10...	--	--	--	--	E1.6	55.0	<30	E7.5

E -- Estimated value.

## CHEYENNE RIVER BASIN

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY

LOCATION.--Lat 44°22'55", long 104°46'45", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.27, T.51 N., R.66 W., Crook County, Hydrologic Unit 10120201, at reservoir dam on Belle Fourche River 12 mi northeast of Moorcroft.

DRAINAGE AREA.--1,953 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level (Bureau of Reclamation datum). Prior to May 15, 1958, and Oct. 1, 1968 to Mar. 13, 1970, nonrecording gages; May 15 1958, to Sept. 30, 1968, water-stage recorder; all at present site and datum.

REMARKS.--Reservoir is formed by a zoned earthfill dam completed by the Bureau of Reclamation Oct. 25, 1952. Storage began Feb. 12, 1952. Dead storage, below elevation 4,036.0 ft, 730 acre-ft. Inactive storage, between elevations 4,036.0 ft and 4,051.0 ft, 7,230 acre-ft. Total capacity below elevation 4,099.3 ft, crest of spillway, 193,800 acre-ft. Figures given herein represent total contents. The reservoir provides flood control and water for irrigation in Wyoming and near Belle Fourche, SD.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 210,000 acre-ft, May 21, 1978, elevation, 4,100.38 ft; minimum daily contents (since appreciable storage was attained), 6,000 acre-ft, May 8, 9, 1955, elevation, 4,095.36 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 173,000 acre-ft, May 16-22, maximum daily elevation, 4,097.00 ft; May 18, minimum daily contents, 157,000 acre-ft, Sept. 29, 30, minimum daily elevation, 4,095.12, Sept. 30.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

4,095	156,000
4,100	200,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

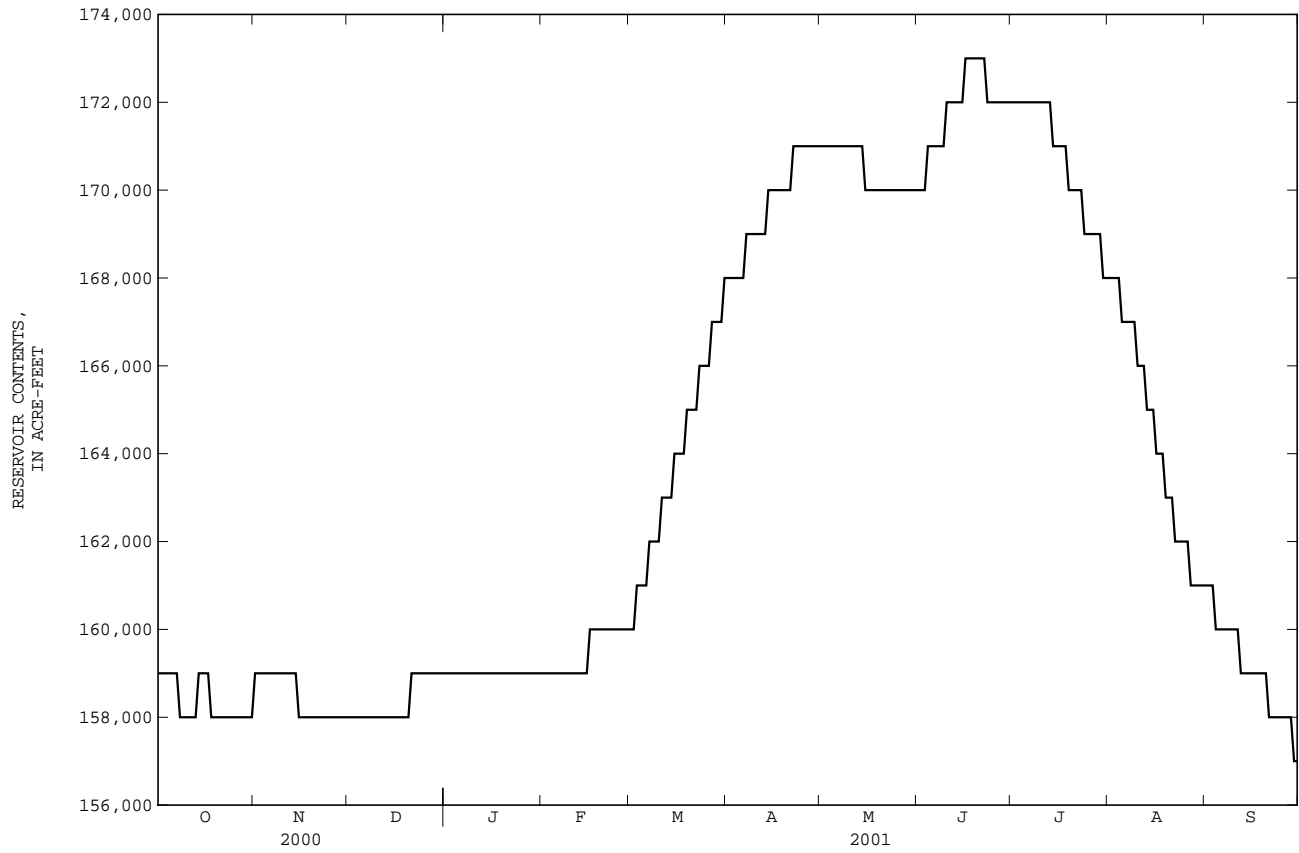
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159000	159000	158000	159000	159000	160000	168000	171000	170000	172000	168000	161000
2	159000	159000	158000	159000	159000	160000	168000	171000	170000	172000	168000	161000
3	159000	159000	158000	159000	159000	161000	168000	171000	170000	172000	168000	161000
4	159000	159000	158000	159000	159000	161000	168000	171000	171000	172000	168000	160000
5	159000	159000	158000	159000	159000	161000	168000	171000	171000	172000	167000	160000
6	159000	159000	158000	159000	159000	161000	168000	171000	171000	172000	167000	160000
7	159000	159000	158000	159000	159000	162000	169000	171000	171000	172000	167000	160000
8	158000	159000	158000	159000	159000	162000	169000	171000	171000	172000	167000	160000
9	158000	159000	158000	159000	159000	162000	169000	171000	171000	172000	167000	160000
10	158000	159000	158000	159000	159000	162000	169000	171000	172000	172000	166000	160000
11	158000	159000	158000	159000	159000	163000	169000	171000	172000	172000	166000	160000
12	158000	159000	158000	159000	159000	163000	169000	171000	172000	172000	166000	159000
13	158000	159000	158000	159000	159000	163000	169000	171000	172000	172000	165000	159000
14	159000	159000	158000	159000	159000	163000	170000	171000	172000	171000	165000	159000
15	159000	158000	158000	159000	159000	164000	170000	170000	172000	171000	165000	159000
16	159000	158000	158000	159000	160000	164000	170000	170000	173000	171000	164000	159000
17	159000	158000	158000	159000	160000	164000	170000	170000	173000	171000	164000	159000
18	158000	158000	158000	159000	160000	164000	170000	170000	173000	171000	164000	159000
19	158000	158000	158000	159000	160000	165000	170000	170000	173000	170000	163000	159000
20	158000	158000	158000	159000	160000	165000	170000	170000	173000	170000	163000	159000
21	158000	158000	159000	159000	160000	165000	170000	170000	173000	170000	163000	158000
22	158000	158000	159000	159000	160000	165000	171000	170000	173000	170000	162000	158000
23	158000	158000	159000	159000	160000	166000	171000	170000	172000	170000	162000	158000
24	158000	158000	159000	159000	160000	166000	171000	170000	172000	169000	162000	158000
25	158000	158000	159000	159000	160000	166000	171000	170000	172000	169000	162000	158000
26	158000	158000	159000	159000	160000	166000	171000	170000	172000	169000	162000	158000
27	158000	158000	159000	159000	160000	167000	171000	170000	172000	169000	161000	158000
28	158000	158000	159000	159000	160000	167000	171000	170000	172000	169000	161000	158000
29	158000	158000	159000	159000	---	167000	171000	170000	172000	169000	161000	157000
30	158000	158000	159000	159000	---	167000	171000	170000	172000	168000	161000	157000
31	158000	---	159000	159000	---	168000	---	170000	---	168000	161000	---
MAX	159000	159000	159000	159000	160000	168000	171000	171000	173000	172000	168000	161000
MIN	158000	158000	158000	159000	159000	160000	168000	170000	170000	168000	161000	157000
(#)	4095.20	4095.21	4095.21	4095.21	4095.43	4096.38	4096.77	4096.64	4096.85	4095.68	4095.57	4095.12
(*)	-1,000	0	1,000	0	1,000	8,000	3,000	-1,000	2,000	-10,000	-1,000	-4,000

WTR YR 2001 MAX 173,000 MIN 158,000 (\*) 0

(#) Elevation, in feet at end of month.

(\*) Change in content, in acre-feet.

06427000 KEYHOLE RESERVOIR NEAR MOORCROFT, WY--Continued



## CHEYENNE RIVER BASIN

06428050 BELLE FOURCHE RIVER BELOW HULETT, WY

LOCATION.--Lat 44°42'04", long 104°35'07", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.6, T.54 N., R.64 W., Crook County, Hydrologic Unit 10120201, at bridge, 1.3 mi northeast of Hulett, and 4.7 mi downstream from Blacktail Creek.

PERIOD OF RECORD.--February 1981 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 14...	1550	10	664	11.8	94	7.6	2390	-1.5	.00	E.040	.210	E.004	E.010
MAR 14...	0830	27	657	8.7	70	7.7	1630	5.5	.00	.182	.261	.007	E.013
MAY 07...	1630	43	670	11.4	134	8.2	1540	18.0	16.5	<.041	E.024	E.005	<.018
AUG 13...	1550	80	670	8.5	121	8.2	1610	36.5	26.5	E.037	E.027	<.006	<.020

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
NOV 14...	450	E1400k	18.2
MAR 14...	E8k	E5k	51.7
MAY 07...	E4k	E3k	25.8
AUG 13...	230	160	9.0

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).



06428200 BELLE FOURCHE RIVER NEAR ALVA, WY

LOCATION.--Lat 44°47'22", long 104°28'51" in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.1, T.55 N., R.64 W., Crook County, Hydrologic Unit 10120201, on right bank 0.3 mi downstream from Beaver Creek and 6.7 miles north of Alva.

DRAINAGE AREA.--2,948 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to 1998, and 2001 (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 3,600 ft above sea level, from topographic map.

REMARKS.--Major regulation by Keyhole Reservoir (station 06427000). Streamflow also affected by diversions for irrigation and return flow from irrigated areas. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Oct. 16 . . . 16.2

COOPERATION.--Station operated and record provided by Office of the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e70	112	135	44	27	22
2	---	---	---	---	---	---	72	96	112	36	26	19
3	---	---	---	---	---	---	76	87	82	31	25	18
4	---	---	---	---	---	---	88	79	95	29	23	17
5	---	---	---	---	---	---	211	72	204	29	21	17
6	---	---	---	---	---	---	393	71	874	27	19	14
7	---	---	---	---	---	---	334	69	491	23	18	14
8	---	---	---	---	---	---	573	66	254	26	17	14
9	---	---	---	---	---	---	449	63	178	49	15	15
10	---	---	---	---	---	---	293	64	133	58	15	14
11	---	---	---	---	---	---	216	66	108	93	14	13
12	---	---	---	---	---	---	164	63	96	176	17	13
13	---	---	---	---	---	---	141	62	100	133	72	13
14	---	---	---	---	---	---	133	59	85	115	81	15
15	---	---	---	---	---	---	125	58	123	117	84	16
16	---	---	---	---	---	---	110	61	139	117	78	16
17	---	---	---	---	---	---	96	63	105	121	79	16
18	---	---	---	---	---	---	93	59	81	118	78	15
19	---	---	---	---	---	---	117	59	68	87	78	14
20	---	---	---	---	---	---	141	59	59	59	78	14
21	---	---	---	---	---	---	151	60	55	41	78	13
22	---	---	---	---	---	---	145	60	51	32	78	13
23	---	---	---	---	---	---	131	59	49	31	78	14
24	---	---	---	---	---	---	110	59	50	52	79	14
25	---	---	---	---	---	---	103	57	47	61	61	12
26	---	---	---	---	---	---	101	54	42	44	32	12
27	---	---	---	---	---	---	106	51	41	42	25	12
28	---	---	---	---	---	---	110	50	40	34	20	13
29	---	---	---	---	---	---	121	51	36	31	18	14
30	---	---	---	---	---	---	125	122	50	29	20	13
31	---	---	---	---	---	---	---	200	---	28	22	---
TOTAL	---	---	---	---	---	---	5098	2211	3983	1913	1376	439
MEAN	---	---	---	---	---	---	170	71.3	133	61.7	44.4	14.6
MAX	---	---	---	---	---	---	573	200	874	176	84	22
MIN	---	---	---	---	---	---	70	50	36	23	14	12
AC-FT	---	---	---	---	---	---	10110	4390	7900	3790	2730	871

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)\*

MEAN	12.4	---	---	---	---	---	114	132	100	73.2	60.6	27.5
MAX	14.4	---	---	---	---	---	360	404	204	109	106	49.7
(WY)	1989	---	---	---	---	---	1997	1995	1993	1989	1989	1993
MIN	10.3	---	---	---	---	---	8.82	37.3	32.8	40.4	22.2	14.6
(WY)	1990	---	---	---	---	---	1992	1992	1992	1998	1996	2001

## CHEYENNE RIVER BASIN

06428200 BELLE FOURCHE RIVER NEAR ALVA, WY--Continued

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR\*

## WATER YEARS 1989 - 2001\*

HIGHEST DAILY MEAN  
 LOWEST DAILY MEAN  
 MAXIMUM PEAK FLOW  
 MAXIMUM PEAK STAGE

874 Jun 6  
 12 Sep 25  
 1060 Jun 6  
 4.69 Jun 6

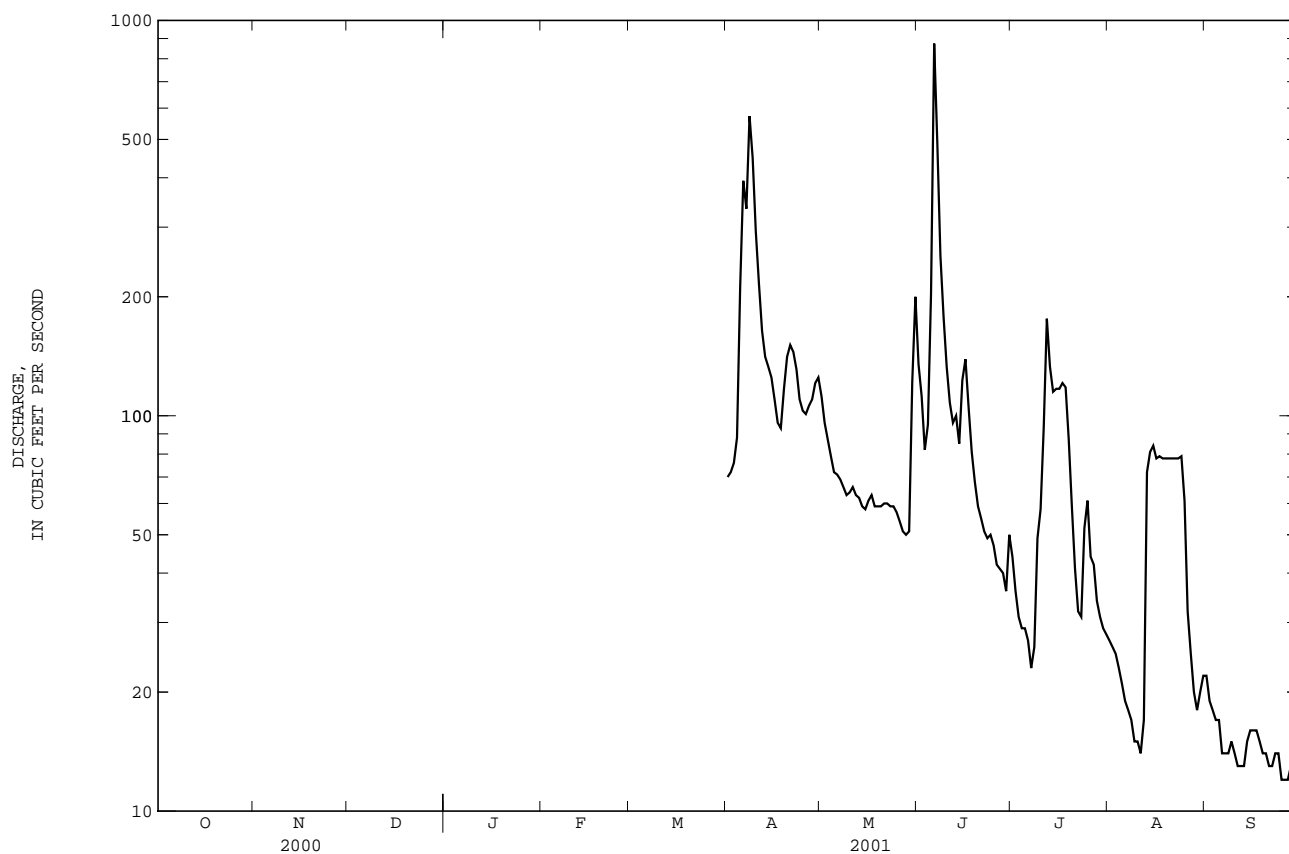
2000 May 9 1995  
 3<sup>a</sup> Jun 11 1992  
 2690<sup>a</sup> May 8 1995  
 8.15<sup>b</sup> Mar 20 1996

\* For period of operation.

a From floodmarks, gage height, 6.76 ft.

b From floodmarks, backwater from ice.

e Estimated.



## 06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°44'59", long 104°02'49", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.18, T.9 N., R.1 E., Butte County, Hydrologic Unit 10120202, on left bank 0.3 mi downstream from State line, 3.7 mi downstream from Oak Creek, and 11 mi northwest of Belle Fourche, SD.

DRAINAGE AREA.--3,280 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--December 1946 to current year. Records for water year 1947 incomplete, yearly estimate published in WSP 1729.

GAGE.--Water-stage recorder. Datum of gage is 3,095.7 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,400 acres. Flow regulated by Keyhole Dam, usable capacity, 191,600 acre-ft, 143 mi upstream since Oct. 25, 1952. Maximum discharge prior to regulation, 3,620 ft<sup>3</sup>/s, June 23, 1947, gage height, 12.51 ft; maximum gage height, 14.33 ft, Mar. 22, 1949, backwater from ice; no flow at times some years. U.S. Bureau of Reclamation satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	312	e18	e12	e19	e21	110	144	142	265	34	12
2	9.9	369	e18	e12	e20	e22	122	138	111	172	31	9.0
3	11	175	e17	e13	e20	e23	119	126	100	84	29	13
4	11	103	e17	e14	e21	e27	143	116	121	62	27	13
5	12	78	e17	e17	e21	e32	502	109	206	51	25	12
6	11	54	e16	e19	e21	e90	587	105	146	46	24	12
7	11	37	e16	e20	e21	e330	646	99	574	42	23	12
8	11	e26	e16	e21	e21	e301	481	95	550	37	20	12
9	12	e23	e15	e21	e21	e280	588	90	444	33	18	11
10	12	e22	e14	e21	e20	e270	497	86	223	35	13	9.4
11	12	e21	e13	e21	e20	e240	365	81	167	55	8.8	7.1
12	13	e21	e12	e20	e19	e200	282	82	136	53	7.7	7.5
13	12	e21	e12	e20	e19	e170	235	75	330	139	9.4	10
14	14	e21	e13	e19	e20	e165	206	70	173	129	11	11
15	24	e20	e13	e19	e20	e160	193	65	151	113	52	12
16	20	e19	e13	e19	e20	154	178	62	147	118	63	13
17	20	e19	e13	e18	e20	146	160	60	147	112	65	15
18	19	e19	e13	e18	e21	185	147	59	135	111	66	14
19	17	e20	e13	e18	e21	199	134	57	105	114	65	13
20	15	e21	e13	e18	e21	178	140	53	92	98	64	13
21	15	e21	e13	e18	e21	176	171	52	83	79	63	12
22	15	e21	e13	e18	e21	205	185	52	75	61	63	11
23	17	e21	e13	e18	e21	181	182	52	70	51	66	11
24	17	e21	e13	e18	e21	184	165	51	65	67	66	10
25	16	e22	e13	e18	e21	194	147	50	63	65	e68	10
26	16	e22	e13	e18	e21	166	137	50	58	127	e58	10
27	15	e20	e14	e18	e21	133	132	48	53	135	e48	9.2
28	16	e20	e14	e18	e21	138	132	46	49	82	e31	9.9
29	16	e19	e14	e18	---	164	132	46	47	53	26	9.8
30	16	e19	e13	e18	---	135	139	48	103	42	19	9.9
31	18	---	e13	e19	---	114	---	44	---	38	18	---
TOTAL	453.2	1607	438	559	574	4983	7357	2311	4866	2669	1181.9	333.8
MEAN	14.6	53.6	14.1	18.0	20.5	161	245	74.5	162	86.1	38.1	11.1
MAX	24	369	18	21	21	330	646	144	574	265	68	15
MIN	9.3	19	12	12	19	21	110	44	47	33	7.7	7.1
AC-FT	899	3190	869	1110	1140	9880	14590	4580	9650	5290	2340	662

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)\*

	MEAN	29.0	28.2	17.9	21.3	44.8	158	166	222	186	94.8	71.2	32.9
MAX	134	277	51.5	247	459	931	823	1104	812	303	271	109	
(WY)	1999	1999	1999	1997	1996	1972	1971	1978	1984	1981	1980	1955	
MIN	.000	.000	.000	.000	.20	15.7	15.1	3.10	11.9	2.94	.10	.000	
(WY)	1955	1961	1961	1961	1959	1981	1992	1961	1961	1960	1961	1954	

## CHEYENNE RIVER BASIN

06428500 BELLE FOURCHE RIVER AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

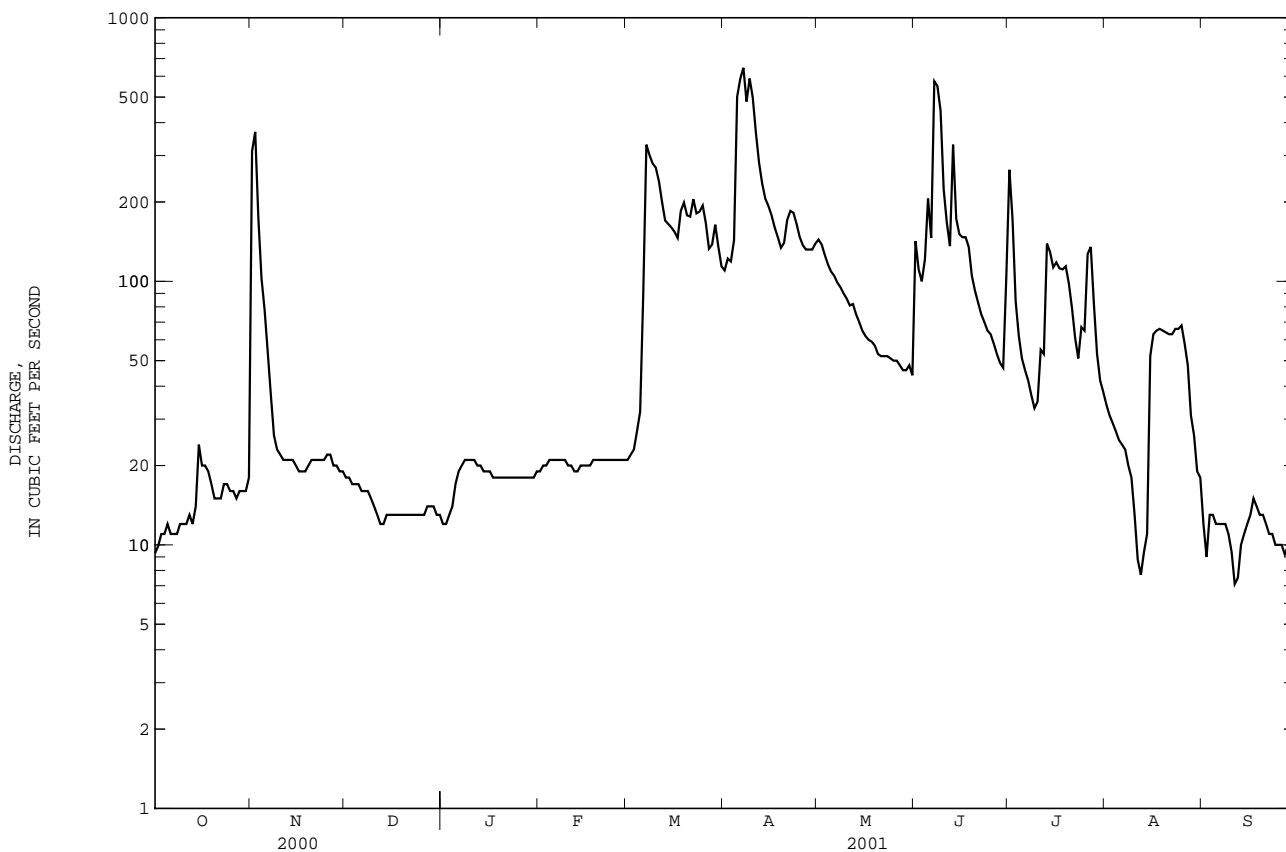
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1954 - 2001*	
ANNUAL TOTAL	13093.2		27332.9		--	
ANNUAL MEAN	35.8		74.9		89.6	
HIGHEST ANNUAL MEAN	--		--		229	
LOWEST ANNUAL MEAN	--		--		7.69	
HIGHEST DAILY MEAN	369	Nov 2	646	Apr 7	4760	May 9 1995
LOWEST DAILY MEAN	3.4	Aug 22	7.1	Sep 11	.00 <sup>a</sup>	Jul 30 1954
ANNUAL SEVEN-DAY MINIMUM	4.6	Sep 9	9.7	Sep 8	.00 <sup>b</sup>	Jul 30 1954
MAXIMUM PEAK FLOW	--		1000	Apr 5	6320 <sup>b</sup>	May 10 1995
MAXIMUM PEAK STAGE	--		9.16	Apr 5	16.33	May 10 1995
ANNUAL RUNOFF (AC-FT)	25970		54210		64900	
10 PERCENT EXCEEDS	70		177		200	
50 PERCENT EXCEEDS	27		23		37	
90 PERCENT EXCEEDS	9.3		12		5.0	

\* Regulated period only (1954-2001). See REMARKS.

a No flow at times in some years.

b Based on slope-area measurement of peak flow.

e Estimated.



LOCATION.--Lat 44°09'15", long 104°04'37", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.9, T.48 N., R.60 W., Weston County, Hydrologic Unit 10120303, on right bank at downstream end of culvert at U.S. Highway 85 and 0.5 mi northeast of Buckhorn.

PERIOD OF RECORD.--October 1974 to September 1982, April 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above sea level, from topographic map. October 1974 to September 1982, 200 ft upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No diversion upstream from station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	e5.4	e5.0	e3.7	e4.0	6.0	5.8	5.9	6.1	5.7	5.9	5.9
2	6.6	e5.2	e4.5	e4.2	e4.6	5.5	5.8	5.9	6.0	5.7	5.9	5.9
3	6.6	e5.0	e4.7	e4.2	e5.4	5.5	6.0	5.9	6.2	5.7	5.9	5.9
4	6.6	e5.2	e5.0	e4.1	e4.8	5.5	6.3	5.9	6.4	5.7	5.9	5.9
5	6.3	e5.4	e5.0	e4.0	e5.0	5.5	6.3	5.9	6.3	5.7	5.9	5.9
6	6.1	e5.0	e4.6	e3.8	e4.8	5.5	6.8	5.9	6.1	5.7	5.9	5.9
7	6.3	e4.5	e5.0	e3.7	e4.8	5.5	6.7	5.9	6.1	5.8	5.9	5.9
8	6.1	e4.0	e4.7	e3.8	e4.7	5.6	6.5	5.7	6.1	6.0	5.9	5.9
9	6.1	e4.2	e4.4	e4.2	e4.3	5.7	6.4	5.7	6.2	5.9	6.0	5.9
10	6.1	e4.5	e4.7	e4.0	e5.0	5.7	6.3	5.8	6.2	5.9	5.9	5.9
11	6.1	e4.0	e5.0	e4.0	e5.0	5.7	6.3	5.8	6.1	5.9	5.9	5.9
12	6.1	e3.5	e4.5	e3.9	e5.2	5.7	6.2	5.9	6.2	5.7	5.9	5.9
13	6.1	e3.8	e4.0	e3.9	e5.6	5.8	6.2	5.9	6.2	5.7	5.9	5.9
14	6.1	e4.0	e4.3	e3.9	e5.2	5.8	6.1	5.7	6.2	5.7	5.9	5.9
15	6.1	e4.5	e4.8	e3.8	e4.6	5.7	6.1	5.7	6.1	5.8	5.9	5.9
16	6.1	e5.0	e4.3	e3.9	e5.6	e5.8	6.0	5.9	5.9	5.7	5.9	5.9
17	6.1	e4.5	e4.6	e4.3	e5.0	e5.8	5.9	5.8	5.9	5.7	5.9	5.9
18	6.1	e5.0	e4.4	e4.0	e5.6	5.8	5.9	5.7	5.9	5.7	5.9	5.9
19	6.1	e4.0	e4.6	e4.5	e6.0	e5.8	6.0	5.7	5.7	5.7	5.9	5.9
20	6.1	e4.5	e4.0	e4.0	e5.6	5.8	6.0	5.7	5.7	5.7	5.9	5.9
21	5.9	e5.0	e3.6	e4.2	e5.4	5.9	5.9	5.9	5.7	5.7	5.9	5.9
22	6.1	e5.0	e4.0	e4.4	e5.8	5.9	5.9	5.9	5.7	5.7	5.9	5.9
23	6.1	e5.8	e4.6	e4.2	e5.4	5.9	5.8	5.7	5.7	5.9	5.9	5.9
24	6.1	e5.4	e4.3	e4.6	e5.6	5.6	5.7	5.7	5.7	5.9	5.9	5.9
25	6.0	e5.2	e4.2	e4.8	e5.4	5.5	5.8	5.7	5.7	5.7	5.9	5.7
26	5.9	e6.0	e4.0	e5.0	e5.2	5.6	5.9	5.7	5.7	5.7	5.9	5.7
27	5.9	e5.8	e4.4	e4.7	e5.6	5.5	5.9	5.7	5.7	5.7	5.9	5.6
28	5.9	e5.0	e4.1	e4.9	e6.0	5.6	5.9	5.9	5.7	5.7	5.9	5.5
29	5.8	e4.5	e4.0	e4.6	---	5.7	5.9	6.3	5.7	5.8	5.9	5.5
30	5.7	e5.0	e4.2	e4.4	---	5.8	5.9	6.3	5.7	5.9	5.9	5.5
31	5.7	---	e4.5	e4.2	---	5.6	---	6.1	---	5.9	5.9	---
TOTAL	189.3	143.9	138.0	129.9	145.2	176.3	182.2	181.2	178.6	178.7	183.0	175.1
MEAN	6.11	4.80	4.45	4.19	5.19	5.69	6.07	5.85	5.95	5.76	5.90	5.84
MAX	6.6	6.0	5.0	5.0	6.0	6.8	6.08	6.3	6.4	6.0	6.0	5.9
MIN	5.7	3.5	3.6	3.7	4.0	5.5	5.7	5.7	5.7	5.7	5.9	5.5
AC-FT	375	285	274	258	288	350	361	359	354	354	363	347

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

MEAN	4.56	4.36	4.24	4.20	4.39	4.77	5.08	4.88	4.95	4.79	4.85	4.81
MAX	7.00	7.15	7.04	7.01	6.75	8.03	7.43	7.29	7.77	7.58	7.28	7.14
(WY)	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	1999	1999
MIN	2.53	2.09	2.06	2.50	2.61	2.91	3.07	3.10	3.19	2.62	2.71	2.92
(WY)	1975	1993	1993	1994	1993	1993	1993	1993	1994	1995	1995	1994

## CHEYENNE RIVER BASIN

06429500 COLD SPRINGS CREEK AT BUCKHORN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1975 - 2001	
ANNUAL TOTAL	2300.8		2001.4		--	
ANNUAL MEAN	6.29		5.48		4.68	
HIGHEST ANNUAL MEAN	--		--		7.06	
LOWEST ANNUAL MEAN	--		--		2.92	
HIGHEST DAILY MEAN	7.7	Feb 27-28	6.8	Apr 6	22	Mar 26 1999
LOWEST DAILY MEAN	3.5	Nov 12	3.5	Nov 12	.30	Dec 20 1996
ANNUAL SEVEN-DAY MINIMUM	4.0	Nov 8	3.9	Jan 6	.75	Dec 18 1996
MAXIMUM PEAK FLOW	--		7.9 <sup>a</sup>	Feb 28	42 <sup>b</sup>	Mar 26 1999
MAXIMUM PEAK STAGE	--		3.45 <sup>c</sup>	Nov 15	8.61 <sup>d</sup>	Jan 12 1978
ANNUAL RUNOFF (AC-FT)	4560		3970		3390	
10 PERCENT EXCEEDS	7.1		6.1		6.6	
50 PERCENT EXCEEDS	6.6		5.7		4.6	
90 PERCENT EXCEEDS	4.7		4.2		3.0	

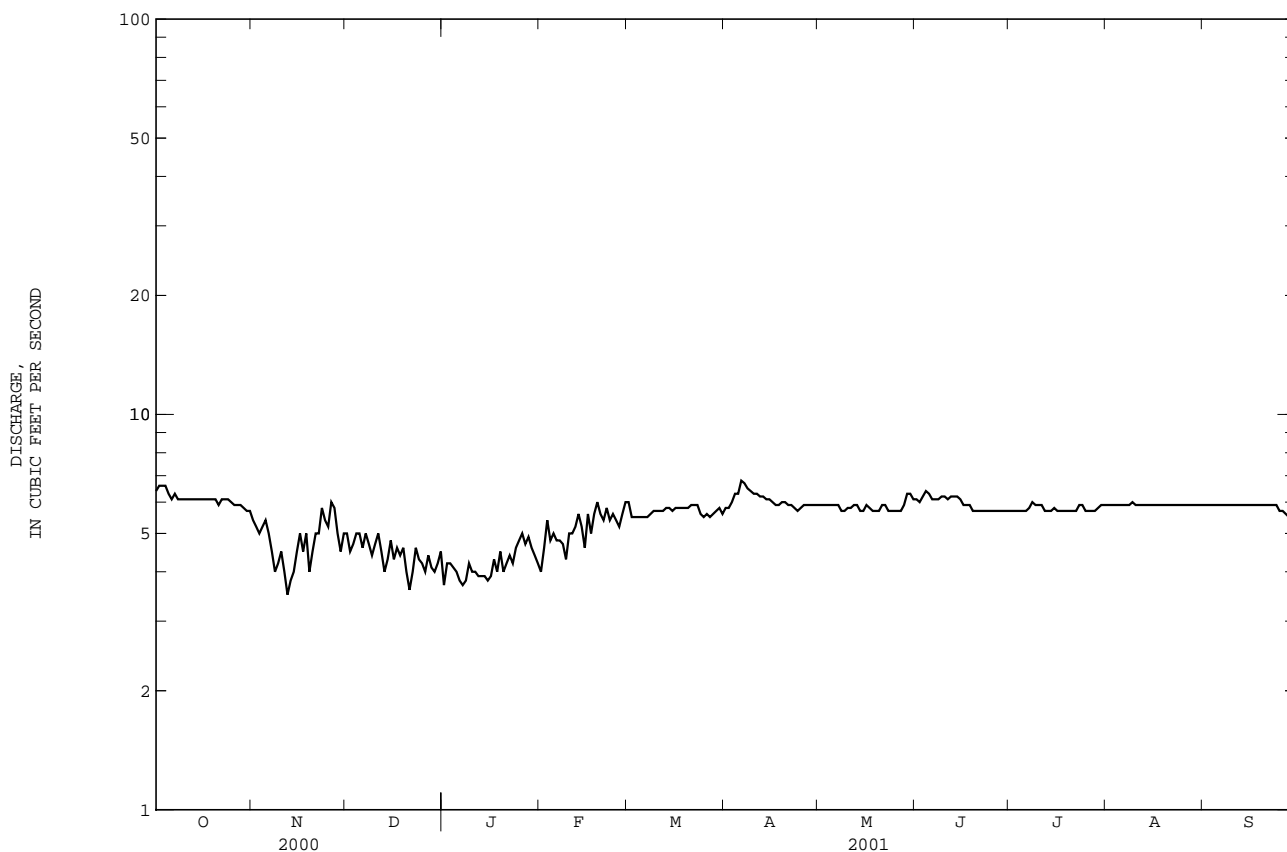
a Gage height, 2.56 ft, maximum observed, may have been greater during periods of estimated daily discharges.

b Gage height, 3.33 ft.

c Backwater from ice.

d Backwater from ice, site and datum then in use.

e Estimated.





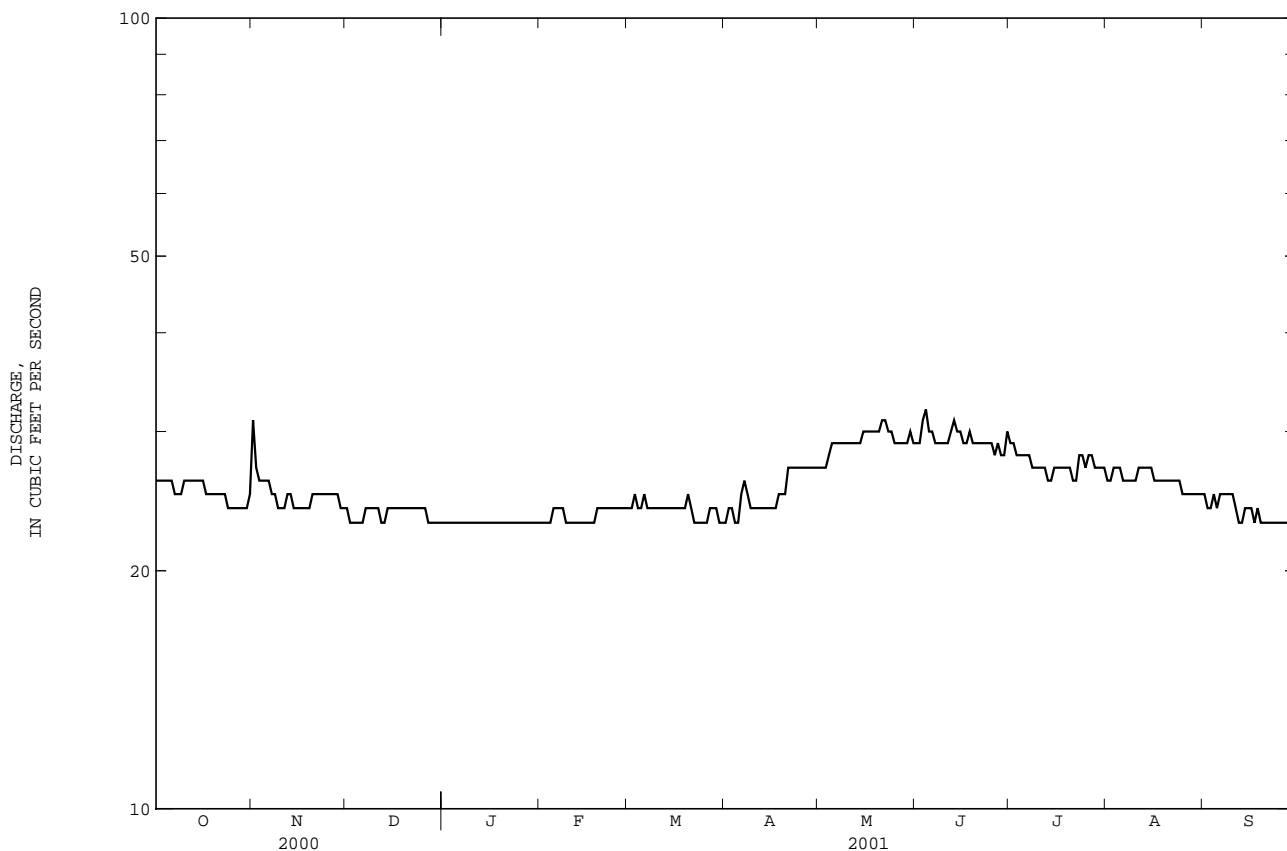
## CHEYENNE RIVER BASIN

06429905 SAND CREEK NEAR RANCH A, NEAR BEULAH, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1977 - 2001
ANNUAL TOTAL	9666	9279	--
ANNUAL MEAN	26.4	25.4	23.5
HIGHEST ANNUAL MEAN	--	--	30.5
LOWEST ANNUAL MEAN	--	--	15.7
HIGHEST DAILY MEAN	35 May 26	32 Jun 4	455 May 9 1995
LOWEST DAILY MEAN	22 Many days	22 Sep 30	12 Mar 10 1992
ANNUAL SEVEN-DAY MINIMUM	22 Mar 29	23 Sep 24	13 Mar 8 1992
MAXIMUM PEAK FLOW	--	34 Jun 30	1230 May 8 1995
MAXIMUM PEAK STAGE	--	1.71 Jun 30	3.80 <sup>a</sup> May 8 1995
ANNUAL RUNOFF (AC-FT)	19170	18400	17000
10 PERCENT EXCEEDS	32	29	30
50 PERCENT EXCEEDS	25	25	23
90 PERCENT EXCEEDS	23	23	16

a From floodmarks, present site and datum.

e Estimated.





## 06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'35", long 104°03'20", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.7, T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on right bank at State line and 12 mi southwest of Belle Fourche, SD.

PERIOD OF RECORD.--April 1987 to current year.

REVISED RECORDS.--WDR SD-96-1: September 1995 daily discharges, monthly, and water year statistics.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 3,440 ft above sea level, from topographic map. Prior to Apr. 23, 1987, published as 06430000 (below diversion at site 15 ft downstream).

REMARKS.--Records good except those for Sept. 9-27, which are fair, and those for estimated daily discharges, which are poor. Ditch diverts water from left bank of Redwater Creek, 2.0 mi upstream, for irrigation of about 700 acres. Flow maintained during irrigation season only. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	1.7	.00	.00	.00	.00	.00	.00	6.5	9.3	3.7	5.5
2	3.1	.00	.00	.00	.00	.00	.00	.00	4.4	8.0	9.0	5.5
3	.87	1.8	.00	.00	.00	.00	.00	.00	4.3	8.0	12	5.9
4	.01	6.6	.00	.00	.00	.00	.00	.00	.13	7.9	12	6.5
5	3.4	.01	.00	.00	.00	.00	.00	.00	.93	7.8	13	8.4
6	10	.00	.00	.00	.00	.00	.00	.00	2.1	7.8	16	11
7	9.3	.00	.00	.00	.00	.00	.00	.00	2.4	7.8	16	10
8	9.2	.00	.00	.00	.00	.00	.00	.00	2.3	5.1	15	9.1
9	8.3	.00	.00	.00	.00	.00	.00	.00	1.6	2.0	3.3	11
10	7.6	.00	.00	.00	.00	.00	.00	.00	.94	3.8	3.3	9.9
11	2.4	.00	.00	.00	.00	.00	.00	.00	.31	5.0	3.5	11
12	.59	.00	.00	.00	.00	.00	.00	.00	.60	5.7	5.4	14
13	.71	.00	.00	.00	.00	.00	.00	.00	.15	3.2	6.2	13
14	.20	.00	.00	.00	.00	.00	.00	.00	.10	.00	23	12
15	4.2	.00	.00	.00	.00	.00	.00	.00	.16	.00	34	12
16	12	.00	.00	.00	.00	.00	.00	9.2	.14	.00	29	11
17	8.9	.00	.00	.00	.00	.00	.00	3.0	3.0	.00	25	4.4
18	4.5	.00	.00	.00	.00	.00	.00	3.0	9.3	.00	21	4.2
19	1.7	.00	.00	.00	.00	.00	.00	2.9	9.0	.00	15	4.2
20	.22	.00	.00	.00	.00	.00	.00	2.6	3.2	.00	16	4.9
21	6.8	.00	.00	.00	.00	.00	.00	9.7	3.1	.00	14	6.0
22	21	.00	.00	.00	.00	.00	.00	14	3.1	7.9	.15	6.1
23	23	.00	.00	.00	.00	.00	.00	12	3.1	16	6.7	1.1
24	20	.00	.00	.00	.00	.00	.00	12	2.7	16	6.2	.00
25	14	.00	.00	.00	.00	.00	.00	12	1.7	15	4.6	.11
26	16	.00	.00	.00	.00	.00	.00	14	2.6	13	5.1	.93
27	9.7	.00	.00	.00	.00	.00	.00	15	10	4.9	5.2	2.6
28	.98	.00	.00	.00	.00	.00	.00	15	9.9	5.6	5.5	4.8
29	.32	.00	.00	.00	---	.00	.00	14	9.2	5.3	5.7	2.1
30	.84	.00	.00	.00	---	.00	.00	7.4	14	4.7	5.9	.00
31	.00	---	.00	.00	---	.00	---	7.3	---	4.4	6.1	---
TOTAL	203.94	10.11	0.00	0.00	0.00	0.00	0.00	153.10	110.96	174.20	346.55	197.24
MEAN	6.58	.34	.000	.000	.000	.000	.000	4.94	3.70	5.62	11.2	6.57
MAX	23	6.6	.00	.00	.00	.00	.00	15	14	16	34	14
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.10	.00	.15	.00
AC-FT	405	20	.00	.00	.00	.00	.00	304	220	346	687	391

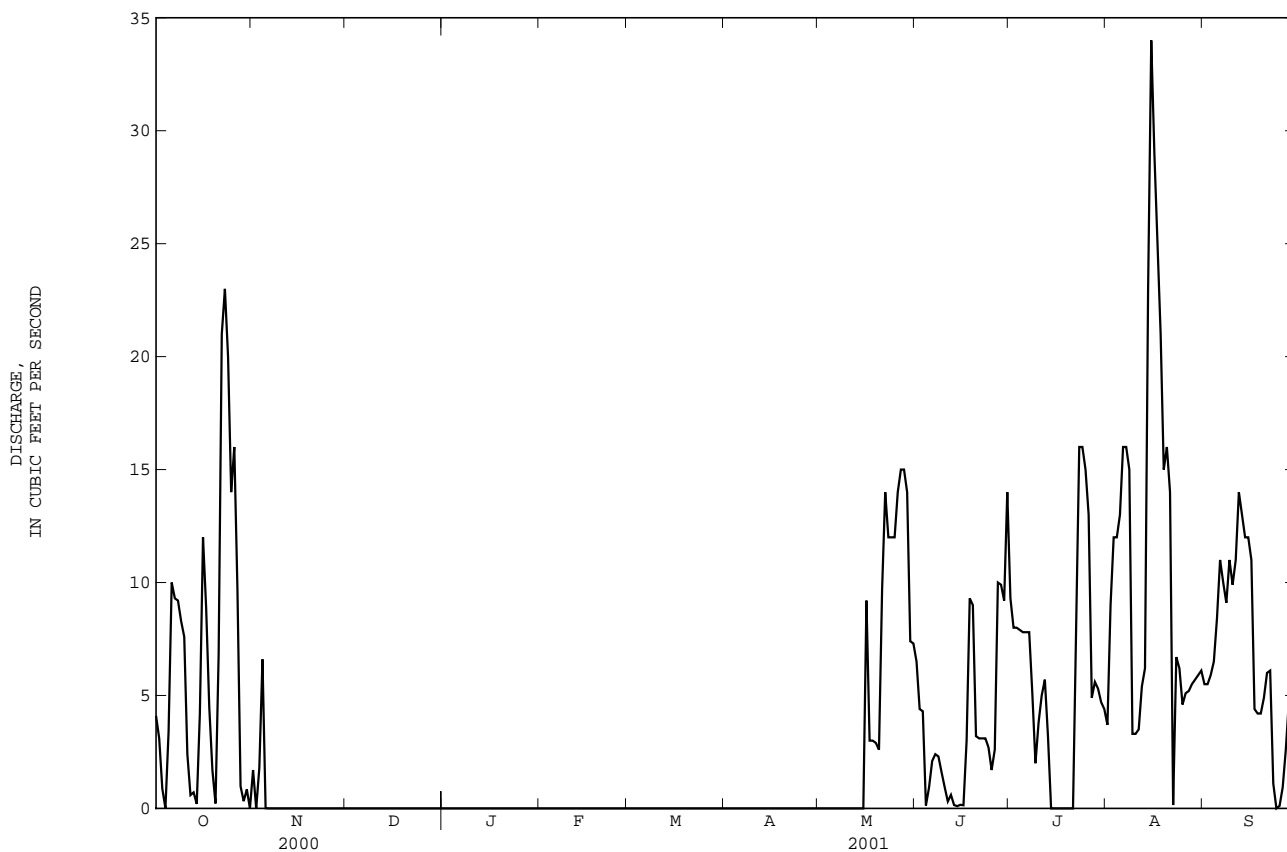
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2001, BY WATER YEAR (WY)

MEAN	5.47	.29	.000	.000	.000	.000	.010	1.48	4.54	9.86	8.38	8.29
MAX	20.6	2.01	.000	.000	.000	.000	.085	6.30	13.9	16.4	18.2	18.8
(WY)	1991	2000	1988	1988	1988	1988	1997	1992	1988	1991	1991	1994
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.84	2.24	.80
(WY)	1988	1988	1988	1988	1988	1988	1988	1990	1991	1993	1998	1993

## CHEYENNE RIVER BASIN

06429997 MURRAY DITCH ABOVE HEADGATE AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1988 - 2001
ANNUAL TOTAL	1016.69	1196.10	--
ANNUAL MEAN	2.78	3.28	3.22
HIGHEST ANNUAL MEAN	--	--	5.32
LOWEST ANNUAL MEAN	--	--	.92
HIGHEST DAILY MEAN	23 Oct 23	34 Aug 15	46 Oct 8 1990
LOWEST DAILY MEAN	.00 Many days	.00 Many days	.00 Many days, each year
ANNUAL RUNOFF (AC-FT)	2020	2370	2330
10 PERCENT EXCEEDS	9.5	12	12
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00



## 06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE

LOCATION.--Lat 44°34'26", long 104°02'54", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.18 T.7 N., R.1 E., Butte County, Hydrologic Unit 10120203, on left bank 800 ft downstream from State line, 5.7 mi upstream from Crow Creek, and 12 mi southwest of Belle Fourche, SD.

DRAINAGE AREA.--471 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1929 to September 1931 and February 1936 to July 1937 (published as "near Beulah, WY"), June 1954 to current year.

REVISED RECORDS.--WSP 1309: 1931(M), 1936-37(M).

GAGE.--Water-stage recorder. Elevation of gage is 3,410 ft above sea level, from topographic map. Apr. 25, 1929, to Sept. 30, 1931, and Feb. 28, 1936, to July 31, 1937, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records good except those for Oct. 31 to Dec. 25, Feb. 5 to Mar. 29, May 27 to June 4, which are fair, and those for estimated daily discharges, which are poor. Large diversions for irrigation upstream from station. Total flow passing State line may be obtained by adding flow of Murray ditch (see station 06429997). Satellite data-collection platform at station. Station operated and record provided by the South Dakota District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	57	39	39	41	39	38	47	37	35	39	32
2	38	49	40	39	41	43	39	47	39	35	38	32
3	37	41	40	39	41	48	39	46	42	33	39	31
4	38	36	39	39	41	51	40	47	52	34	40	30
5	35	40	39	39	42	46	42	48	52	34	37	29
6	29	40	39	39	41	49	49	49	50	34	35	27
7	30	40	40	39	43	52	59	48	43	35	35	26
8	31	41	40	39	41	49	78	48	43	38	37	25
9	34	41	40	39	e39	46	66	48	42	42	43	26
10	34	42	40	40	e39	44	59	49	41	38	44	25
11	38	41	e39	39	e40	42	51	48	41	39	44	24
12	36	41	e38	40	41	41	48	48	42	39	43	22
13	35	41	e39	40	41	41	46	48	44	41	42	22
14	38	41	e39	40	41	42	46	49	43	47	35	22
15	34	41	40	40	41	42	45	49	43	48	30	24
16	29	40	e39	40	40	40	44	43	43	47	32	23
17	31	40	e39	40	40	40	43	46	40	45	32	23
18	33	40	39	40	41	40	43	46	34	44	33	24
19	35	40	39	40	41	40	44	45	34	44	34	24
20	37	40	40	39	40	41	50	46	39	44	37	23
21	33	40	e39	39	39	41	52	37	38	43	35	23
22	27	40	e39	39	39	41	52	29	38	35	42	25
23	27	39	39	39	39	40	50	31	38	29	34	30
24	28	39	39	39	39	40	47	32	40	29	29	30
25	28	39	39	40	39	39	47	32	41	30	30	32
26	28	39	39	40	39	39	46	30	39	34	30	30
27	32	40	39	39	38	40	47	29	34	42	30	30
28	37	40	39	40	39	40	47	29	34	40	31	27
29	37	39	39	40	---	39	47	31	34	39	31	33
30	37	40	39	40	---	39	47	37	45	39	31	39
31	39	---	39	41	---	39	---	37	---	40	31	---
TOTAL	1043	1227	1216	1225	1126	1313	1451	1299	1225	1196	1103	813
MEAN	33.6	40.9	39.2	39.5	40.2	42.4	48.4	41.9	40.8	38.6	35.6	27.1
MAX	39	57	40	41	43	52	78	49	52	48	44	39
MIN	27	36	38	39	38	39	38	29	34	29	29	22
AC-FT	2070	2430	2410	2430	2230	2600	2880	2580	2430	2370	2190	1610

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2001, BY WATER YEAR (WY)\*

	MEAN	28.8	32.9	32.7	32.0	33.2	34.8	38.1	53.9	46.7	23.8	23.6	25.6
MAX	45.0	47.9	48.0	48.5	57.8	66.0	65.4	168	128	54.9	58.9	50.4	
(WY)	1973	1974	1999	1999	1971	1996	1999	1995	1976	1976	1973	1973	
MIN	14.2	20.8	21.5	20.7	21.2	22.1	18.8	7.44	6.29	7.62	6.78	11.8	
(WY)	1991	1961	1993	1993	1993	1962	1981	1985	1961	1990	1985	1985	

## CHEYENNE RIVER BASIN

06430500 REDWATER CREEK AT WYOMING-SOUTH DAKOTA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1955 - 2001*	
ANNUAL TOTAL	15001		14237		--	
ANNUAL MEAN	41.0		39.0		33.8	
HIGHEST ANNUAL MEAN	--		--		56.0	
LOWEST ANNUAL MEAN	--		--		17.9	
HIGHEST DAILY MEAN	64	Apr 26	78	Apr 8	1330	May 9 1995
LOWEST DAILY MEAN	23	Several days	22	Sep 12-14	1.3 <sup>a</sup>	May 22 1985
ANNUAL SEVEN-DAY MINIMUM	23	Jul 23	23	Sep 11	1.9	May 21 1985
MAXIMUM PEAK FLOW	--		82 <sup>b</sup>	Apr 8	2440 <sup>c</sup>	Aug 22 1973
MAXIMUM PEAK STAGE	--		4.32 <sup>d</sup>	Dec 13	12.19	Aug 22 1973
ANNUAL RUNOFF (AC-FT)	29750		28240		24510	
10 PERCENT EXCEEDS	52		47		48	
50 PERCENT EXCEEDS	42		39		31	
90 PERCENT EXCEEDS	28		30		16	

\* Period using present site and datum only. See GAGE.

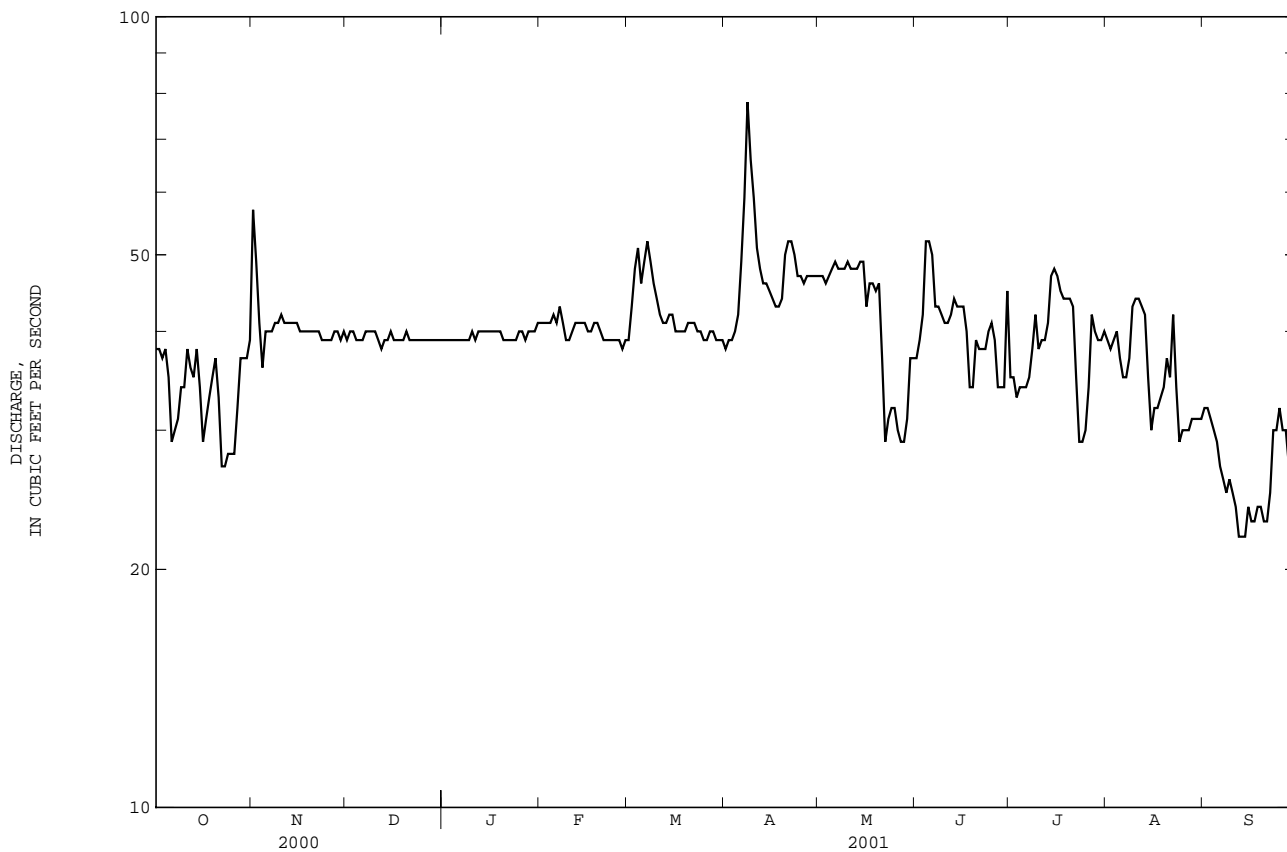
a No flow Aug. 13-15, 1929, during partial year.

b Gage height, 3.74 ft. Also June 30, gage height, 4.04 ft.

c From rating curve extended above 1,000 ft<sup>3</sup>/s on basis of slope-area measurement.

d Backwater from ice.

e Estimated.



06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

LOCATION.--Lat 40°56'15", long 106°20'16", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.11, T.11 N., R.80 W., Jackson County, Hydrologic Unit 10180001, on right bank 1,000 ft downstream from bridge on State Highway 125, 0.7 mi upstream from Camp Creek, 4.2 mi northwest of Northgate, and 4.4 mi south of Colorado-Wyoming State line.

DRAINAGE AREA.--1,431 mi<sup>2</sup>.

PERIOD OF RECORD.--May to November 1904 (published as "near Pinkhampton"), May 1915 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1916-21, 1929(M), 1930-32. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,810.39 ft above sea level. See WSP 1730 for history of changes prior to Apr. 8, 1918. Apr. 8, 1918, to Aug. 21, 1961, water-stage recorder at site 0.7 mi downstream at datum 3.36 ft lower. Aug. 22, 1961, to Sept. 18, 1984, at site 650 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions for irrigation of about 130,000 acres of hay meadows upstream from station. Transbasin diversions upstream from station to Cache la Poudre River basin. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	116	e80	e68	e74	e105	e230	702	618	291	98	59
2	95	110	e80	e66	e76	e100	e240	671	617	271	99	61
3	88	e96	e84	e68	e78	e100	e360	702	691	268	90	62
4	86	e90	e86	e70	e82	e105	e600	625	788	259	85	60
5	81	e94	e86	e70	e88	e110	e640	550	702	256	80	56
6	76	e90	e84	e72	e92	e115	e660	608	590	242	77	54
7	76	e86	e86	e68	e92	e115	619	550	518	216	77	57
8	74	e86	e88	e66	e90	e115	508	423	482	220	94	66
9	72	e88	e88	e66	e86	e115	431	359	523	289	144	92
10	72	e94	e88	e68	e86	e120	377	351	595	263	191	109
11	75	e90	e86	e72	e88	e115	358	431	615	235	161	102
12	77	e82	e82	e74	e90	e115	333	534	595	248	155	88
13	77	e74	e82	e74	e94	e120	313	565	598	243	142	92
14	77	e76	e84	e72	e100	e115	305	583	629	264	129	72
15	78	e82	e84	e70	e98	e110	294	651	611	256	137	73
16	82	e84	e84	e68	e96	e110	294	798	508	237	151	72
17	83	e80	e82	e66	e98	e115	317	893	412	199	156	75
18	83	e74	e80	e68	e105	e115	375	1030	355	167	135	80
19	83	e74	e80	e70	e110	e115	476	1060	322	148	116	90
20	83	e76	e78	e72	e110	e120	549	1060	330	142	101	85
21	83	e80	e78	e70	e110	e130	525	991	351	130	91	70
22	83	e84	e80	e70	e110	e150	466	802	329	122	89	60
23	83	e82	e82	e70	e115	e190	401	586	322	107	92	55
24	87	e78	e80	e68	e115	e230	385	465	325	99	95	53
25	100	e78	e78	e70	e110	e270	458	411	319	94	90	53
26	102	e82	e74	e72	e110	e250	462	425	318	92	77	48
27	105	e84	e72	e72	e105	e240	453	463	337	119	66	46
28	108	e82	e74	e74	e105	e230	503	557	366	142	60	46
29	115	e84	e72	e76	---	e230	604	718	348	126	57	45
30	111	e84	e68	e76	---	e240	705	725	326	107	56	44
31	115	---	e70	e74	---	e230	---	634	---	95	55	---
TOTAL	2711	2560	2500	2180	2713	4640	13241	19923	14440	5947	3246	2025
MEAN	87.5	85.3	80.6	70.3	96.9	150	441	643	481	192	105	67.5
MAX	115	116	88	76	115	270	705	1060	788	291	191	109
MIN	72	74	68	66	74	100	230	351	318	92	55	44
AC-FT	5380	5080	4960	4320	5380	9200	26260	39520	28640	11800	6440	4020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2001, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
MEAN	161	153	104	84.0	89.4	177	753	1139	1472	637	265	149
MAX	538	366	215	177	199	722	2444	3649	3296	2367	763	712
(WY)	1962	1962	1998	1984	1986	1986	1962	1984	1983	1957	1983	1997
MIN	31.7	54.2	33.9	27.5	35.7	47.8	131	212	89.4	26.7	38.5	23.8
(WY)	1935	1935	1977	1977	1933	1964	1981	1981	1934	1934	1934	1934

## PLATTE RIVER BASIN

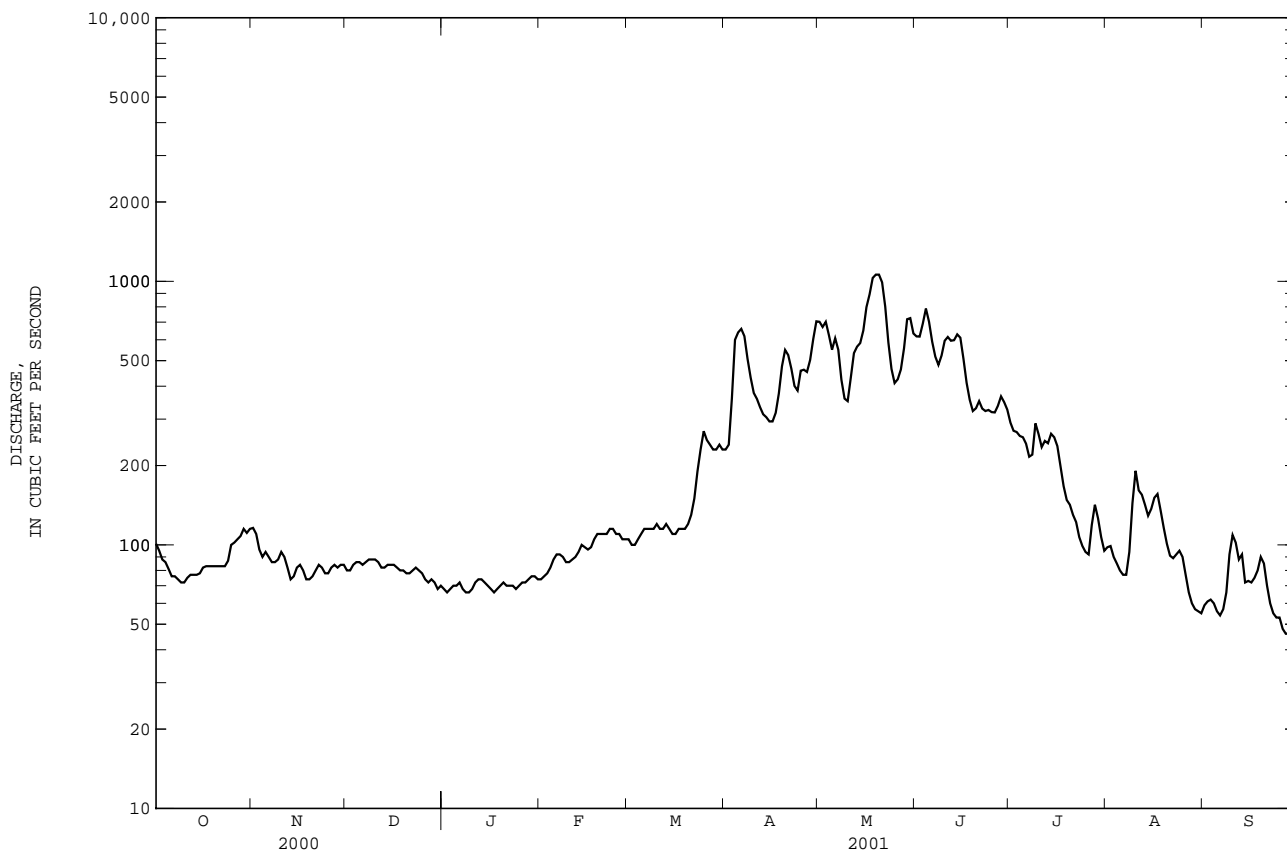
06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1904 - 2001	
ANNUAL TOTAL	110675		76126		--	
ANNUAL MEAN	302		209		433	
HIGHEST ANNUAL MEAN	--		--		878	1917
LOWEST ANNUAL MEAN	--		--		117	1977
HIGHEST DAILY MEAN	2030	Jun 1	1060	May 19,20	6450	Jun 10 1923
LOWEST DAILY MEAN	48	Sep 12-19	44	Sep 30	19	Jul 17,19 1934
ANNUAL SEVEN-DAY MINIMUM	48	Sep 12	48	Sep 24	20	Jul 15 1934
MAXIMUM PEAK FLOW	--		1100	May 18	6720 <sup>a</sup>	Jun 11 1923
MAXIMUM PEAK STAGE	--		5.12 <sup>b</sup>	Apr 4	9.65 <sup>b</sup>	Apr 25 1980
ANNUAL RUNOFF (AC-FT)	219500		151000		313900	
10 PERCENT EXCEEDS	871		572		1200	
50 PERCENT EXCEEDS	100		100		162	
90 PERCENT EXCEEDS	74		70		70	

a Gage height, 6.24 ft, site and datum then in use.

b Backwater from ice jam.

e Estimated.



LOCATION.--Lat 41°22'13", long 106°31'12", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.8, T.16 N., R.81 W., Carbon County, Hydrologic Unit 101800002, Medicine Bow National Forest, on right bank 0.2 mi upstream from bridge on logging road, 0.5 mi downstream from Lincoln Creek, 1.6 mi upstream from South Brush Creek, and 16 mi southeast of Saratoga.

PERIOD OF RECORD.--May 1960 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,020 ft above sea level, from topographic map. Prior to June 17, 1971, at site 0.02 mi downstream at different datum. June 17, 1971, to Aug. 2, 1984, at site 0.2 mi downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	e6.0	e8.5	e8.7	e7.5	e7.2	e8.6	77	217	23	7.5	6.7
2	11	e6.8	e8.3	e8.9	e7.6	e7.3	e9.0	56	240	21	7.0	6.2
3	9.9	e6.9	e8.5	e9.2	e7.9	e7.3	e10	75	212	19	6.8	5.9
4	9.2	e7.3	e8.4	e9.3	e7.9	e7.3	e11	47	153	18	7.0	5.8
5	8.7	e8.2	e8.3	e8.9	e7.9	e7.7	e12	41	110	16	6.6	6.3
6	8.0	e7.9	e8.1	e8.7	e7.8	e8.5	e13	42	111	16	7.2	7.3
7	7.7	e7.6	e8.7	e8.6	e7.3	e8.6	e12	49	133	15	11	7.0
8	9.0	e7.7	e8.3	e8.5	e7.0	e8.5	e12	67	140	20	8.9	9.0
9	8.5	e8.1	e8.2	e8.7	e6.7	e7.8	e12	91	143	15	14	9.7
10	8.5	e8.0	e8.6	e9.2	e6.8	e7.3	e11	130	138	14	8.7	11
11	8.5	e7.4	e8.2	e9.2	e7.0	e7.1	e11	157	131	26	7.7	7.7
12	8.5	e7.5	e8.1	e8.9	e7.2	e7.1	e13	189	109	17	7.1	6.8
13	8.2	e8.2	e8.4	e8.9	e7.2	e7.3	e12	234	88	15	6.9	6.5
14	8.4	e8.6	e9.0	e8.6	e7.1	e7.9	e11	280	72	13	9.6	7.9
15	9.3	e8.9	e8.9	e8.6	e7.1	e7.9	e12	362	84	13	12	7.8
16	9.6	e8.7	e8.8	e8.4	e7.1	e7.7	e11	500	73	12	8.4	7.7
17	9.8	e8.6	e8.4	e7.9	e7.1	e7.1	e14	408	65	10	7.4	8.4
18	10	e8.4	e9.1	e7.7	e7.2	e7.4	e18	293	67	9.5	6.8	14
19	11	e8.5	e9.4	e7.7	e7.4	e7.6	29	305	65	9.2	6.4	9.4
20	11	e8.9	e9.4	e7.9	e7.6	e7.4	27	257	60	8.8	6.8	7.5
21	9.8	e9.1	e9.5	e7.9	e7.6	e8.8	22	161	56	8.4	8.0	6.8
22	9.8	e8.9	e9.2	e7.9	e7.5	e9.1	17	137	53	8.0	9.1	6.4
23	9.6	e8.6	e8.9	e7.7	e7.5	e9.5	18	174	51	7.9	8.7	6.2
24	9.5	e8.4	e8.9	e7.4	e7.3	e10	17	230	49	8.0	7.0	6.2
25	9.5	e8.2	e8.8	e7.7	e7.4	e9.5	22	246	49	7.7	6.4	6.1
26	10	e8.0	e8.4	e7.6	e7.5	e9.2	31	263	45	8.0	6.2	6.1
27	10	e8.2	e8.7	e7.7	e7.2	e10	42	295	42	8.6	5.8	6.0
28	9.8	e8.3	e8.8	e7.6	e7.0	e10	51	256	35	7.6	5.7	6.0
29	9.7	e8.4	e8.7	e7.7	---	e10	58	231	30	7.1	5.8	6.0
30	9.0	e8.4	e8.5	e7.5	---	e10	62	247	26	6.8	6.0	6.0
31	8.6	---	e8.6	e7.4	---	e9.0	---	210	---	7.8	6.4	---
TOTAL	294.1	242.7	268.6	256.6	205.4	257.1	608.6	6110	2847	396.4	238.9	220.4
MEAN	9.49	8.09	8.66	8.28	7.34	8.29	20.3	197	94.9	12.8	7.71	7.35
MAX	14	9.1	9.5	9.3	7.9	10	62	500	240	26	14	14
MIN	7.7	6.0	8.1	7.4	6.7	7.1	8.6	41	26	6.8	5.7	5.8
AC-FT	583	481	533	509	407	510	1210	12120	5650	786	474	43

MEAN	14.0	11.5	10.0	9.27	9.24	10.5	23.6	169	258	56.3	13.8	12.6
MAX	38.7	21.3	15.1	14.0	12.7	20.1	73.4	272	534	224	29.5	27.2
(WY)	1966	1962	1984	1999	1999	1966	1962	2000	1983	1983	1983	1965
MIN	7.77	7.60	6.67	6.15	6.55	6.80	12.3	53.5	57.4	11.9	7.71	7.22
(WY)	1990	2000	1991	1970	1970	1970	1993	1995	1987	1994	2001	1989

## PLATTE RIVER BASIN

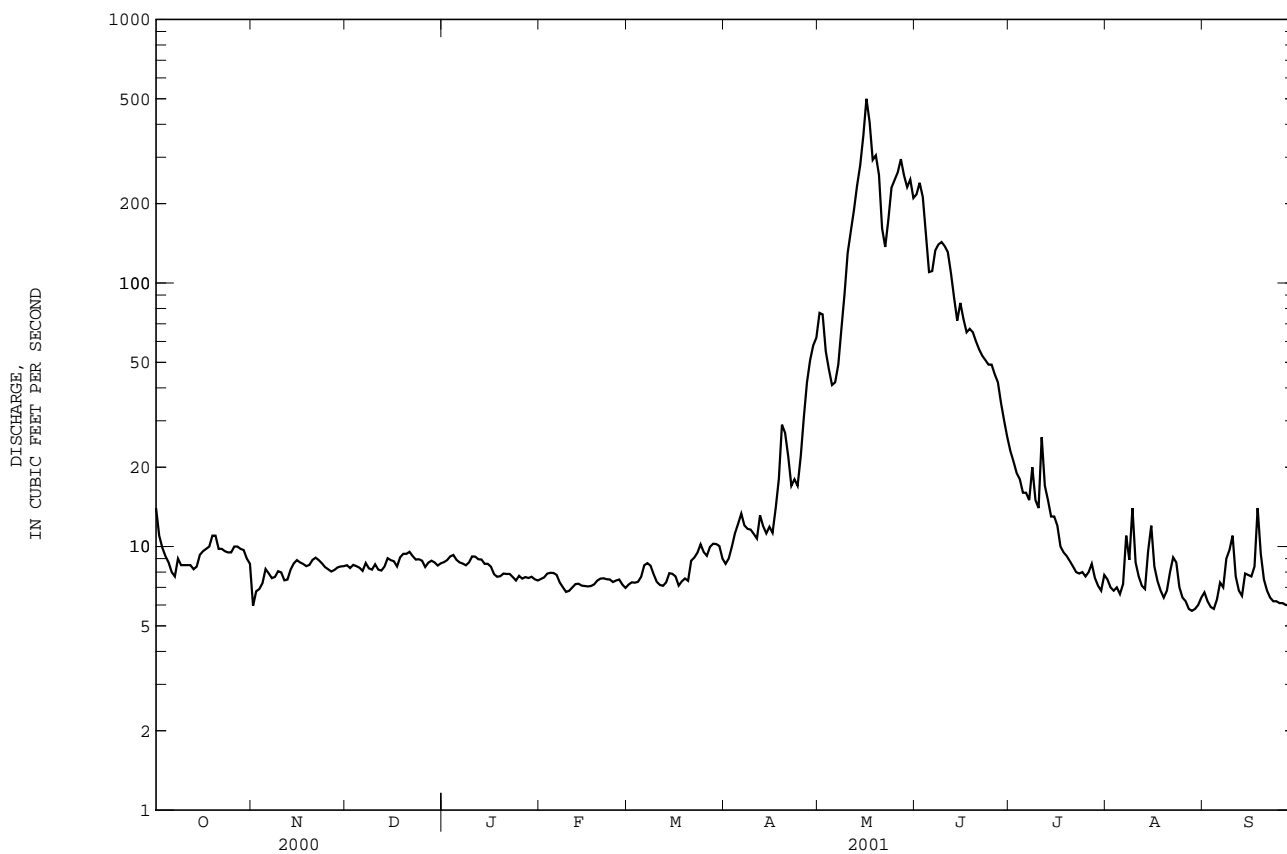
06622700 NORTH BRUSH CREEK NEAR SARATOGA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1961 - 2001	
ANNUAL TOTAL	15486.7		11945.8		--	
ANNUAL MEAN	42.3		32.7		49.9	
HIGHEST ANNUAL MEAN	--		--		82.0	
LOWEST ANNUAL MEAN	--		--		27.3	
HIGHEST DAILY MEAN	625	May 24	500	May 16	955	Jun 25 1983
LOWEST DAILY MEAN	6.0	Sep 7,16-18, Nov 1	5.7	Aug 28	4.3	Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	6.2	Sep 13	6.0	Aug 25	5.1 <sup>a</sup>	Oct 25 1976
MAXIMUM PEAK FLOW	--		696	May 16	1360 <sup>a</sup>	Jun 25 1983
MAXIMUM PEAK STAGE	--		4.16	May 16	5.75 <sup>b</sup>	Jun 7 1964
ANNUAL RUNOFF (AC-FT)	30720		23690		36140	
10 PERCENT EXCEEDS	122		86		160	
50 PERCENT EXCEEDS	9.1		8.7		12	
90 PERCENT EXCEEDS	7.5		7.0		8.1	

a Gage height, 4.23 ft, site and datum then in use.

b Site and datum then in use.

e Estimated.





PLATTE RIVER BASIN  
06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY  
(Hydrologic Benchmark Station)

LOCATION.--Lat 41°01'25", long 106°49'27", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.10, T.12 N., R.84 W., Carbon County, Hydrologic Unit 10180002, Medicine Bow National Forest, on left bank 0.6 mi upstream from Hog Park Creek and 13 mi south of Encampment.

DRAINAGE AREA.--72.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 8,270 ft above sea level, from topographic map. U.S Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	18	e20	e17	e15	e16	18	170	583	94	33	27
2	23	e18	e20	e18	e15	e16	18	165	632	87	29	20
3	22	e16	e20	e18	15	e16	e18	103	600	83	28	19
4	21	e18	e19	e18	15	e15	23	91	496	78	28	18
5	20	e24	e18	e17	16	e16	e25	89	431	74	27	19
6	19	e22	e18	e17	16	e17	29	94	430	70	26	21
7	19	e16	e19	e18	16	e18	26	110	459	69	26	20
8	19	e18	e20	e18	15	e19	24	145	461	71	27	26
9	20	e21	e21	e19	e14	e19	e20	189	466	64	36	28
10	20	e21	e20	e18	e15	17	e20	261	465	62	36	32
11	20	e17	e18	e18	e16	e17	e19	315	446	84	34	26
12	20	e16	e17	e17	e17	e17	e18	348	408	65	27	21
13	20	e19	e17	e17	e17	e18	e19	399	373	64	26	20
14	21	e19	e18	e17	e17	e17	19	451	299	64	31	21
15	21	e20	e18	e17	e16	e16	e18	539	266	61	37	22
16	22	e19	e18	e15	e15	e16	23	655	252	56	46	20
17	21	e17	e17	e16	e15	e16	29	583	249	49	30	21
18	21	e18	e18	e16	e16	18	36	529	241	45	25	31
19	20	e19	e19	e16	e16	19	50	651	224	43	23	25
20	20	e19	e19	e16	e17	20	63	554	205	41	22	21
21	19	19	e19	e17	e17	23	53	456	192	40	24	19
22	19	e19	e20	e17	e17	e25	36	410	178	38	26	18
23	19	e19	e20	e17	e16	e26	34	450	168	36	24	17
24	20	e20	e18	e16	e16	e25	32	511	156	36	21	17
25	21	e19	e18	e16	e16	20	37	525	147	35	20	17
26	21	e20	e17	e16	e16	21	51	586	142	40	19	16
27	20	e19	e18	e16	e15	e19	74	638	134	42	18	16
28	20	e20	e18	e16	e15	e19	102	608	119	34	18	16
29	20	e19	e18	e16	---	19	127	602	112	32	18	16
30	20	e19	e17	e15	---	18	123	579	101	30	18	16
31	20	---	e17	e15	---	e17	---	554	---	35	22	---
TOTAL	634	568	574	520	442	575	1184	12360	9435	1722	825	626
MEAN	20.5	18.9	18.5	16.8	15.8	18.5	39.5	399	314	55.5	26.6	20.9
MAX	26	24	21	19	17	26	127	655	632	94	46	32
MIN	19	16	17	15	14	15	18	89	101	30	18	16
AC-FT	1260	1130	1140	1030	877	1140	2350	24520	18710	3420	1640	1240

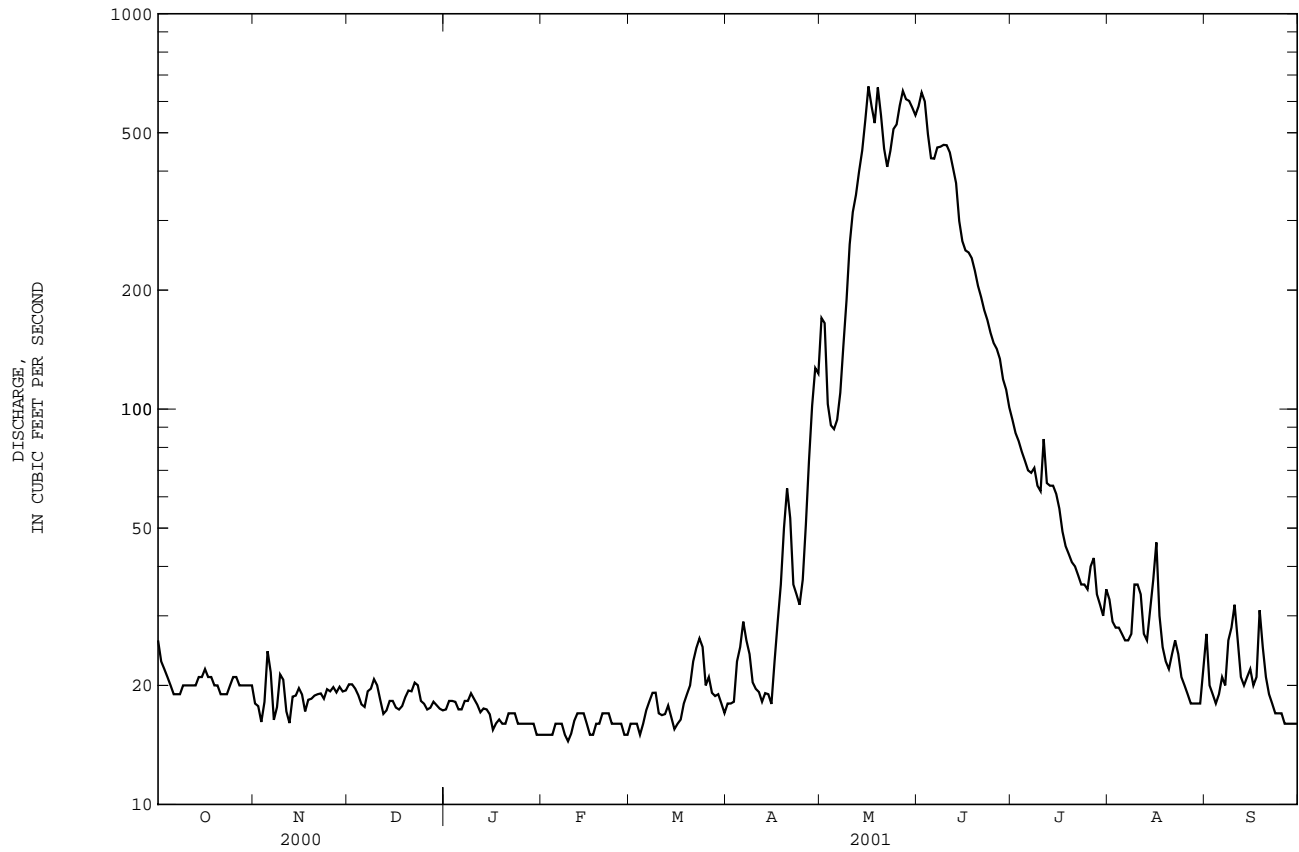
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

	MEAN	31.2	25.1	22.5	20.0	18.9	20.0	40.8	284	603	205	47.2	32.9
MAX	71.5	45.2	33.9	28.9	28.1	31.4	76.5	471	919	581	83.3	82.2	
(WY)	1998	1998	1998	1971	1971	1997	1989	2000	1997	1995	1995	1997	
MIN	17.5	15.6	11.7	10.9	10.8	10.9	19.3	120	171	46.2	25.2	18.1	
(WY)	1992	1978	1969	1969	1969	1969	1975	1995	1992	1994	1977	1994	

PLATTE RIVER BASIN  
06623800 ENCAMPMENT RIVER ABOVE HOG PARK CREEK, NEAR ENCAMPMENT, WY  
(Hydrologic Benchmark Station)-Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1965 - 2001	
ANNUAL TOTAL	34266		29465		--	
ANNUAL MEAN	93.6		80.7		113	
HIGHEST ANNUAL MEAN	--		--		159	
LOWEST ANNUAL MEAN	--		--		51.2	
HIGHEST DAILY MEAN	1010	May 29	655	May 16	1360	Jun 25 1983
LOWEST DAILY MEAN	15	Sep 16,17	14	Feb 9	9.5	Dec 31 1968
ANNUAL SEVEN-DAY MINIMUM	16	Sep 13	15	Jan 29	10	Mar 8 1969
MAXIMUM PEAK FLOW	--		874	May 16	1680 <sup>a</sup>	Jun 13 1965
MAXIMUM PEAK STAGE	--		4.11	May 16	5.01 <sup>b</sup>	Jun 25 1970
ANNUAL RUNOFF (AC-FT)	67970		58440		81540	
10 PERCENT EXCEEDS	302		263		382	
50 PERCENT EXCEEDS	24		20		28	
90 PERCENT EXCEEDS	18		16		17	

a About June 13, 1965; from slope-area measurement of peak flow, gage height not determined.  
b Highest recorded.  
e Estimated.



06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°18'12", long 106°42'53", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.3, T.15 N., R.83 W., Carbon County, Hydrologic Unit 10180002, on left bank 0.5 mi upstream from mouth and 8.0 mi northeast of Encampment.

DRAINAGE AREA.--265 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1940 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,970 ft above sea level, from topographic map. Prior to June 28, 1961, water-stage recorder at site 660 ft upstream at datum 2.00 ft higher. U.S Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Five small reservoirs upstream from station for irrigation, total capacity, about 400 acre-ft. Slight regulation by Hog Park Creek Reservoir, capacity, about 2,970 acre-ft. Diversions for irrigation of about 8,800 acres upstream from station. Transbasin diversion upstream from station into Hog Park Creek (tributary to Encampment River) from North Fork Little Snake River for municipal, industrial, and irrigation uses began September 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	87	e89	e73	e65	e61	87	543	898	67	42	51
2	74	80	e89	e74	e64	e64	89	632	963	61	43	50
3	88	74	e91	e75	e66	e65	96	508	1000	54	43	47
4	87	81	e90	e75	e72	e64	107	452	790	53	40	43
5	85	95	e89	e74	e75	e64	118	444	602	50	40	42
6	84	88	e89	e74	e76	e65	135	416	562	48	41	45
7	83	83	e90	e74	e74	e67	128	426	599	50	40	45
8	83	80	e89	e74	e72	76	123	486	625	69	40	53
9	83	87	e87	e76	e69	80	115	573	643	62	40	53
10	86	87	e88	e75	e63	83	116	663	660	64	41	52
11	84	e80	e88	e73	e66	75	116	775	630	97	45	52
12	84	e78	e85	e73	e69	73	111	839	562	75	41	47
13	83	e82	e84	e72	e71	73	116	938	511	70	39	46
14	85	e81	e85	e71	e73	73	112	1060	432	93	42	47
15	87	e79	e84	e70	e72	72	106	1230	369	99	45	46
16	88	e79	e83	e69	e66	75	116	1440	322	70	53	50
17	87	e76	e79	e68	e62	73	129	1500	306	58	58	48
18	87	e79	e78	e67	e64	70	154	1230	287	53	49	56
19	86	e83	e82	e67	e62	73	194	1290	263	49	47	57
20	86	e86	e82	e67	e64	79	231	1250	245	48	47	49
21	85	e88	e82	e69	e64	90	223	1010	218	47	47	45
22	84	e87	e82	e69	e65	96	207	861	184	44	49	42
23	83	e87	e78	e70	e66	97	182	873	116	42	48	42
24	83	e89	e75	e68	e67	93	180	937	127	42	47	40
25	85	e88	e74	e68	e65	98	186	998	124	41	46	50
26	88	e89	e74	e69	e65	107	219	1030	120	43	44	57
27	85	e89	e75	e68	e65	95	277	1130	126	45	42	58
28	85	e89	e74	e68	e62	87	372	1120	100	41	41	57
29	87	e89	e73	e67	---	87	488	1070	90	40	42	67
30	84	e89	e73	e66	---	84	487	1060	78	40	47	66
31	84	---	e73	e66	---	83	---	928	---	41	50	---
TOTAL	2606	2529	2554	2189	1884	2442	5320	27712	12552	1756	1379	1503
MEAN	84.1	84.3	82.4	70.6	67.3	78.8	177	894	418	56.6	44.5	50.1
MAX	88	95	91	76	76	107	488	1500	1000	99	58	67
MIN	63	74	73	66	62	61	87	416	78	40	39	40
AC-FT	5170	5020	5070	4340	3740	4840	10550	54970	24900	3480	2740	2980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	79.0	78.8	69.7	62.3	63.0	70.9	149	771	1184	283	67.9	55.8
MAX	167	156	131	122	115	117	352	1258	2029	942	178	174	
(WY)	1998	1998	1998	1998	1962	1989	1962	1952	1971	1995	1982	1997	
MIN	29.4	42.6	49.2	34.2	35.8	44.5	71.3	340	193	29.2	21.5	14.2	
(WY)	1980	1977	1964	1963	1955	1964	1944	1977	1987	1994	1948	1954	

## PLATTE RIVER BASIN

06625000 ENCAMPMENT RIVER AT MOUTH, NEAR ENCAMPMENT, WY--Continued

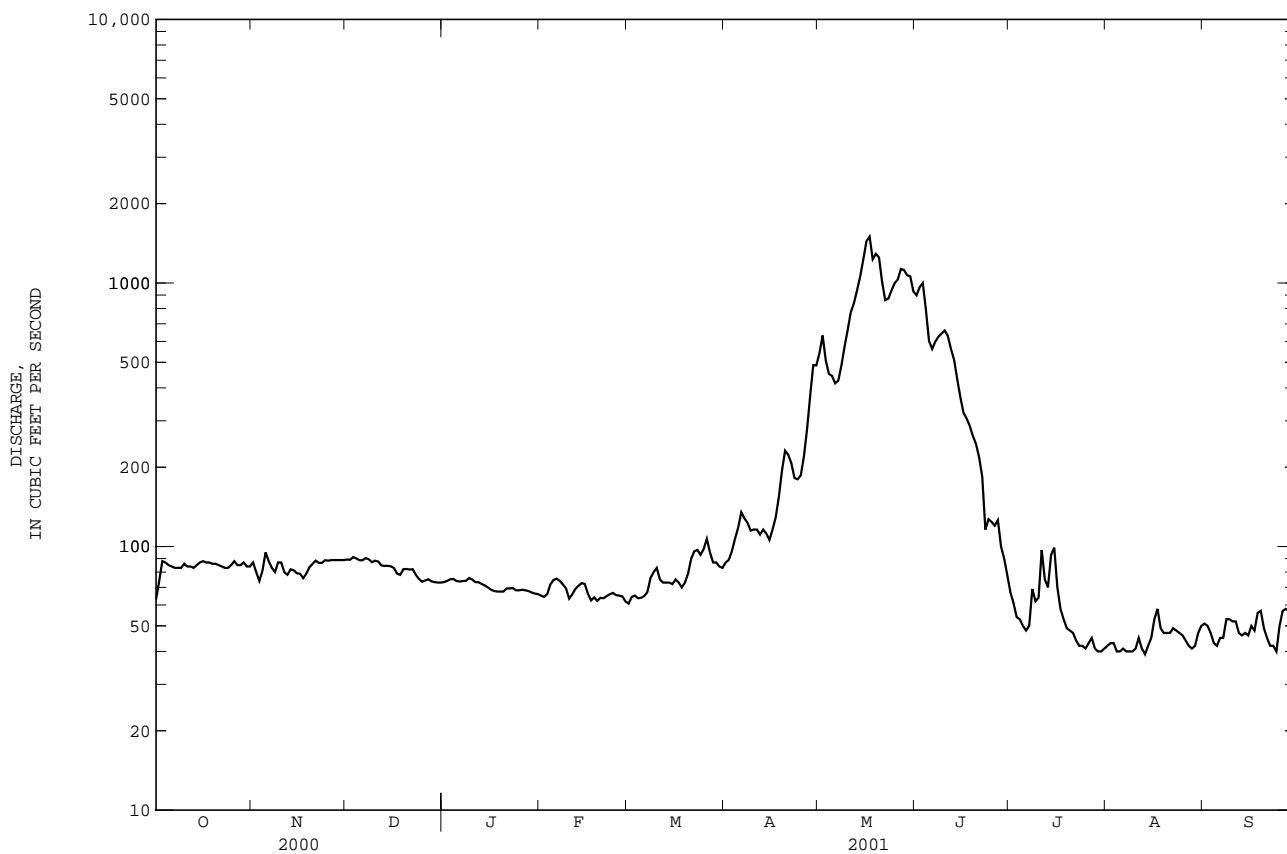
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1941 - 2001	
ANNUAL TOTAL	71554		64426		--	
ANNUAL MEAN	196		177		245	
HIGHEST ANNUAL MEAN	--		--		375	
LOWEST ANNUAL MEAN	--		--		102	
HIGHEST DAILY MEAN	1880	May 30	1500	May 17	3640	Jun 4 1952
LOWEST DAILY MEAN	17	Aug 12,13	39	Aug 13	8.0 <sup>a</sup>	Sep 1 1954
ANNUAL SEVEN-DAY MINIMUM	19	Aug 7	40	Aug 4	8.9 <sup>b</sup>	Aug 28 1954
MAXIMUM PEAK FLOW	--		1770	May 17	4510 <sup>b</sup>	Jun 1 1943
MAXIMUM PEAK STAGE	--		5.10	May 17	10.33 <sup>c</sup>	Jun 4 1952
ANNUAL RUNOFF (AC-FT)	141900		127800		177200	
10 PERCENT EXCEEDS	627		551		790	
50 PERCENT EXCEEDS	84		79		75	
90 PERCENT EXCEEDS	27		45		42	

a Minimum daily discharge for period of record, 5.2 ft<sup>3</sup>/s, Aug. 15, 16, 1940.

b Gage height, 10.25 ft, present datum.

c Present datum.

e Estimated.



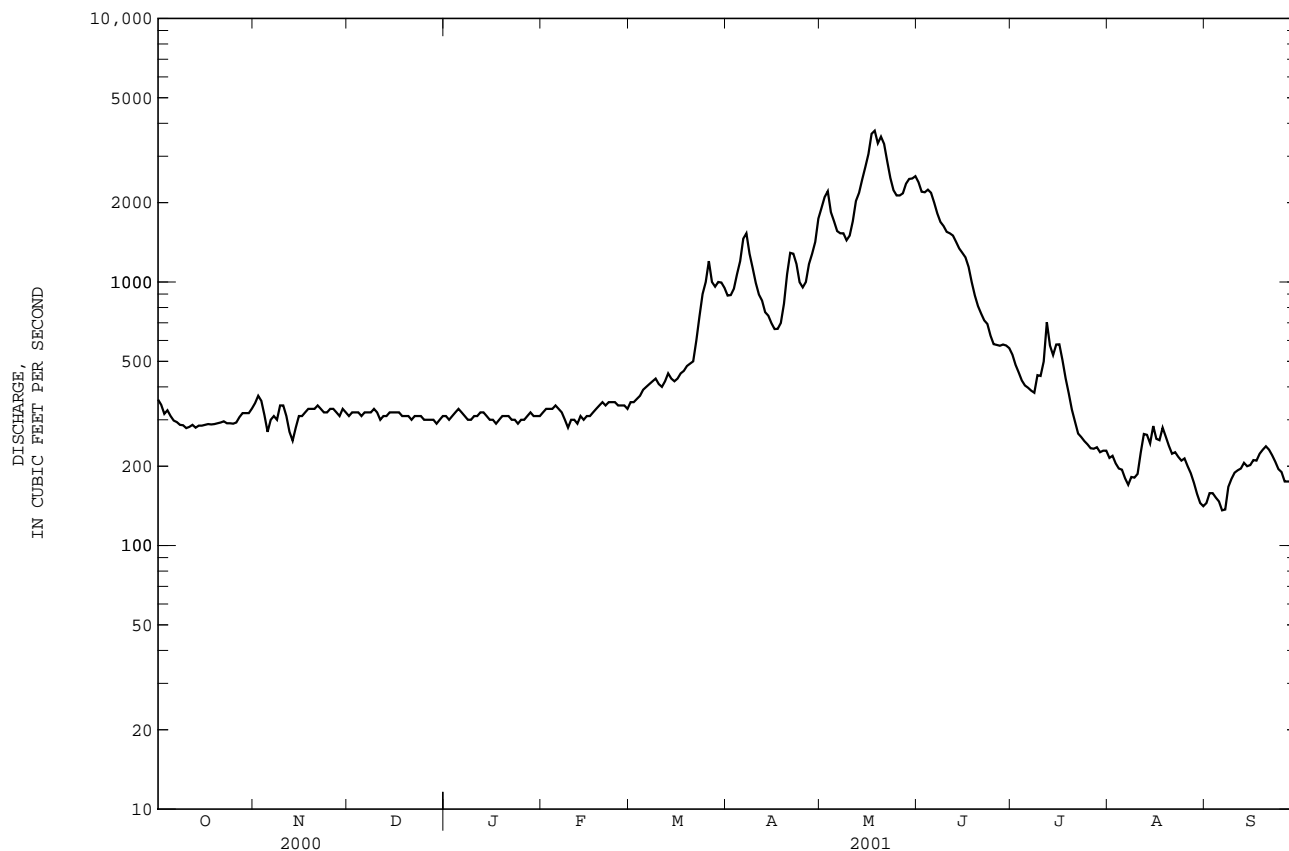
MEAN	415	429	352	318	349	555	1417	3163	4378	1412	502	314
MAX	1036	745	562	515	654	1190	4390	8568	9999	5256	1484	1198
(WY)	1966	1966	1998	1998	1996	1986	1962	1984	1983	1983	1983	1997
MIN	157	240	226	181	193	205	492	1149	830	204	135	93.3
(WY)	1957	1953	1953	1963	1964	1964	1995	1990	1954	1939	1940	1944

## PLATTE RIVER BASIN

06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1939 - 2001	
ANNUAL TOTAL	286897		232395		--	
ANNUAL MEAN	784		637		1136	
HIGHEST ANNUAL MEAN	--		--		2169	1984
LOWEST ANNUAL MEAN	--		--		467	1954
HIGHEST DAILY MEAN	5310	May 30	3750	May 18	14800	Jun 11 1986
LOWEST DAILY MEAN	89	Sep 19	136	Sep 6	70	Sep 17 1944
ANNUAL SEVEN-DAY MINIMUM	96	Sep 15	148	Sep 1	77	Sep 12 1944
MAXIMUM PEAK FLOW	--		4120	May 17	16200	Jun 11 1986
MAXIMUM PEAK STAGE	--		6.05	May 17	11.30	Jun 11 1986
ANNUAL RUNOFF (AC-FT)	569100		461000		823300	
10 PERCENT EXCEEDS	2230		1590		3150	
50 PERCENT EXCEEDS	360		320		446	
90 PERCENT EXCEEDS	180		207		230	

e Estimated.



06630000 NORTH PLATTE RIVER ABOVE SEMINOE RESERVOIR, NEAR SINCLAIR, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-2001 (discontinued).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1978 to October 1978.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
MAY 04...	1640	1900	605	11.0	116	8.1	227	3.5	7.5	194	--	<.040	E.023
JUN 15...	1025	1260	604	10.2	117	8.1	287	20.0	11.0	186	--	<.040	<.050
JUN 26...	1030	571	600	8.4	121	8.7	354	26.5	21.0	222	<10	<.040	<.050
JUL 23...	1015	260	606	--	--	8.4	424	23.5	20.0	261	23	<.040	E.034
AUG 23...	1030	215	607	7.7	101	8.2	424	23.0	17.0	274	64	<.040	<.050

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)
MAY 04...	<.006	<.020	--	--
JUN 15...	E.004	<.020	--	--
JUN 26...	E.005	<.020	--	--
JUL 23...	<.006	E.012	41	41
AUG 23...	<.006	<.020	--	--

E -- Estimated value.

## PLATTE RIVER BASIN

06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY

LOCATION.--Lat 41°35'07", long 106°13'20", in SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec. 25, T.19 N., R.79 W., Carbon County, Hydrologic Unit 10180004, on left bank 200 ft upstream from point of diversion to King Canyon Canal, 0.4 mi downstream from Overland Creek, 1.0 mi southwest of Arlington, and 6.9 mi southwest of McFadden.

DRAINAGE AREA.--62.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR WY-86: 1985(m). WDR WY-87: 1985.

GAGE.--Water-stage recorder. Elevation of gage is 7,790 ft above sea level, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Minor regulation by Sand Lake, capacity, 1,100 acre-ft, on Deep Creek, 12 mi upstream. No diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	6.1	e9.2	9.1	e7.2	e6.2	9.2	82	498	69	16	9.7
2	12	7.2	e9.0	9.1	e7.4	e6.6	10	93	534	63	15	8.9
3	11	e7.2	9.3	9.4	e7.6	e6.6	12	71	489	58	15	8.7
4	10	e7.8	9.0	8.9	e7.6	e6.4	13	64	370	54	15	8.6
5	9.8	e8.8	9.0	8.8	e7.2	e6.4	15	66	287	50	14	8.7
6	9.2	e8.4	e8.8	8.6	7.0	6.9	16	61	280	48	14	8.8
7	8.5	e8.0	9.3	e8.6	6.6	e8.2	14	55	316	46	15	9.5
8	7.7	e8.0	9.1	e8.4	6.6	e8.6	14	60	329	51	15	14
9	9.0	e8.6	9.1	e8.6	6.0	e8.0	13	82	327	55	17	13
10	10	e8.4	9.5	e8.8	e6.0	7.4	13	124	321	79	16	16
11	9.5	e8.0	e9.2	8.4	6.5	e7.2	12	170	312	101	14	14
12	9.3	e8.0	e9.0	8.2	6.6	e7.2	16	237	277	65	13	11
13	9.1	e8.6	e9.4	8.1	6.5	e7.4	14	317	221	59	13	10
14	9.0	e9.0	e9.6	8.0	6.3	e7.8	13	439	169	51	14	11
15	9.4	e9.2	e9.4	8.0	6.4	e7.8	14	645	161	49	16	11
16	9.6	e9.2	e9.4	8.0	6.5	e7.6	12	895	151	40	15	11
17	10	e9.0	e9.0	7.8	6.3	e7.2	15	722	159	35	14	11
18	9.9	e8.8	e9.4	8.1	6.4	e7.6	22	534	163	32	13	18
19	10	e9.4	e10.5	8.1	6.3	e7.8	30	561	170	30	12	15
20	9.8	e9.6	e10.5	8.2	6.5	7.6	30	503	169	28	12	12
21	9.9	10	11	8.0	e6.4	9.8	24	347	163	26	12	10
22	9.5	9.8	11	7.7	6.6	10	20	289	154	24	13	9.8
23	9.5	9.2	10	7.5	6.8	11	22	339	145	23	17	9.4
24	9.5	8.9	9.5	7.5	6.7	12	22	431	135	22	13	9.2
25	9.6	8.9	9.5	7.8	e6.6	11	23	467	136	20	11	8.9
26	9.7	8.9	9.2	7.6	6.8	10	29	522	123	20	10	8.8
27	9.3	8.9	9.4	7.7	6.4	12	36	636	111	21	10	8.7
28	9.8	9.0	9.2	7.4	e6.2	12	46	556	98	19	9.9	8.6
29	10	9.0	9.0	7.5	---	12	61	507	85	17	9.6	8.6
30	9.8	8.9	8.9	e7.4	---	12	63	513	75	17	9.3	8.6
31	11	---	9.0	e7.0	---	10	---	478	---	17	10	---
TOTAL	304.4	258.8	292.4	252.3	186.0	268.3	653.2	10866	6928	1289	412.8	320.5
MEAN	9.82	8.63	9.43	8.14	6.64	8.65	21.8	351	231	41.6	13.3	10.7
MAX	14	10	11	9.4	7.6	12	63	895	534	101	17	18
MIN	7.7	6.1	8.8	7.0	6.0	6.2	9.2	55	75	17	9.3	8.6
AC-FT	604	513	580	500	369	532	1300	21550	13740	2560	819	636

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	MEAN	16.9	13.8	11.8	10.8	10.4	10.6	23.0	233	499	129	31.0	21.1
MAX	40.0	23.3	18.8	15.3	17.0	15.6	45.8	409	1024	420	66.9	40.1	
(WY)	1983	1999	1973	1966	1974	1979	1989	1974	1971	1982	1982	1971	
MIN	9.57	8.63	6.81	7.74	6.64	7.08	10.9	59.3	158	27.3	11.0	10.3	
(WY)	1990	2001	1968	1969	2001	1969	1995	1968	1987	2000	2000	1994	



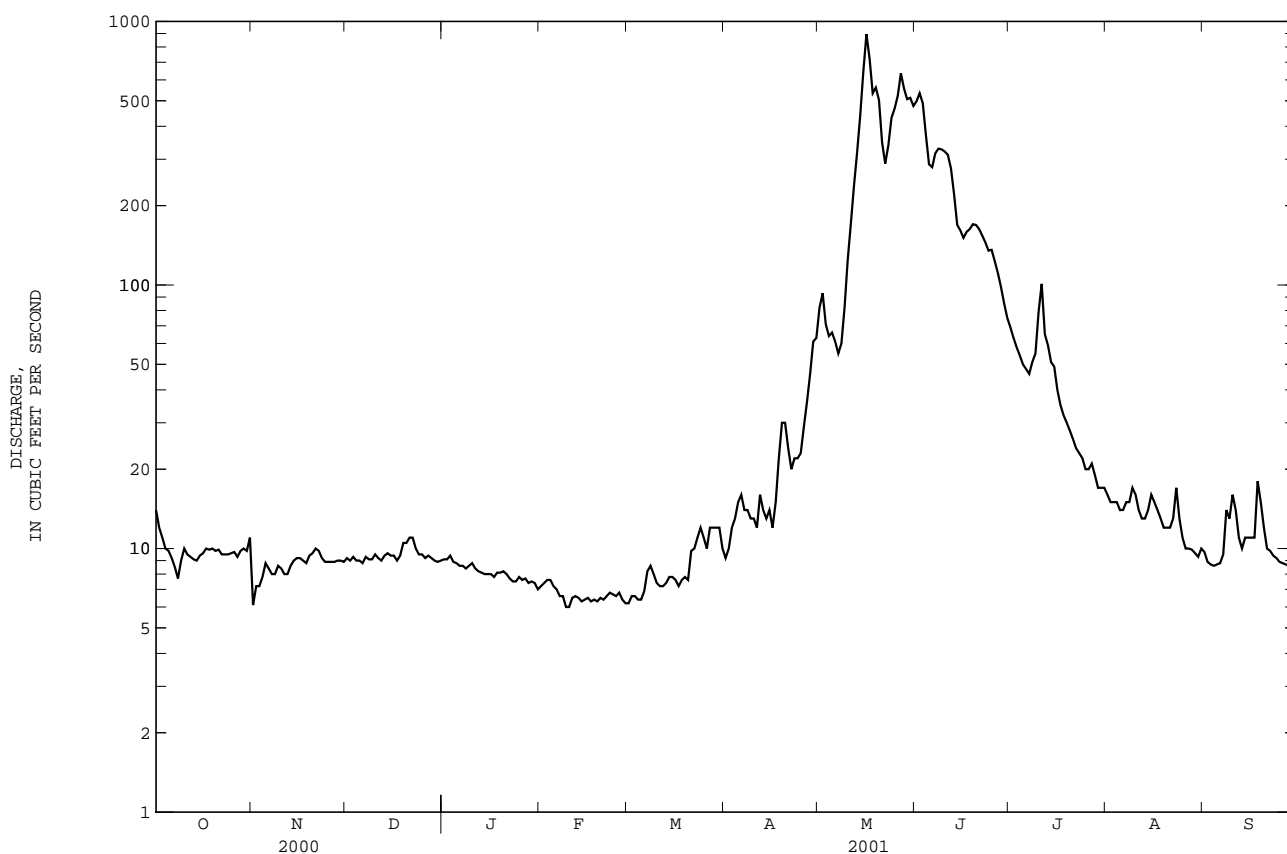
06632400 ROCK CREEK ABOVE KING CANYON CANAL, NEAR ARLINGTON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1966 - 2001	
ANNUAL TOTAL	20237.5		22031.7		--	
ANNUAL MEAN	55.3		60.4		84.2 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		142	
LOWEST ANNUAL MEAN	--		--		48.9	
HIGHEST DAILY MEAN	750	May 24	895	May 16	1690	Jun 19 1971
LOWEST DAILY MEAN	6.1	Nov 1	6.0	Feb 9	4.8	Nov 2 1991
ANNUAL SEVEN-DAY MINIMUM	7.6	Nov 1	6.3	Feb 9	6.0	Oct 29 1991
MAXIMUM PEAK FLOW	--		1310		2590 <sup>b</sup>	
MAXIMUM PEAK STAGE	--		4.65		5.92	
ANNUAL RUNOFF (AC-FT)	40140		43700		60980 <sup>a</sup>	
10 PERCENT EXCEEDS	180		169		277	
50 PERCENT EXCEEDS	10		10		15	
90 PERCENT EXCEEDS	8.6		7.2		8.9	

a Mean, water years 1955-2001, 81.5 ft<sup>3</sup>/s; runoff, water years 1955-2001, 59,030 acre-feet; includes records for station 06632500, Rock Creek at Arlington for water years 1955-1965, adjusted for diversion by King Canyon Canal.

b Gage height, 5.83 ft.

e Estimated.



## PLATTE RIVER BASIN

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY

LOCATION.--Lat 41°57'40", long 106°12'31", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.17, T.23 N., R.78 W., Carbon County, Hydrologic Unit 10180005, on right bank 50 ft downstream from Boles Spring, 3.9 mi downstream from State Highway 487, 4.3 mi north of Medicine Bow, and 8.7 mi downstream from Muddy Creek.

DRAINAGE AREA.--969 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year. Records for October 1973 to September 1984 at site 5.5 mi upstream published as "near Medicine Bow" (station 06634600) do not include flow of Boles Spring. Discharge records considered equivalent except for low flow.

GAGE.--Water-stage recorder. Elevation of gage is 6,570 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	1.4	.90	.56	.47	72	355	70	5.0	10	3.4
2	9.7	10	1.1	.75	.57	.91	e65	351	60	4.5	8.9	3.3
3	8.9	5.4	1.1	.66	.58	2.1	e75	361	55	4.0	7.8	3.5
4	8.8	4.9	1.2	.66	.58	5.0	e85	276	51	3.7	6.6	3.6
5	8.2	5.0	1.1	.71	.64	8.2	168	247	46	3.6	5.5	3.7
6	8.2	4.5	1.1	.79	.58	11	246	272	42	3.3	4.7	3.7
7	8.0	4.0	1.1	.76	.49	13	274	251	39	3.6	4.3	3.4
8	7.7	6.8	1.1	.64	.62	15	264	214	37	4.3	4.1	3.9
9	7.8	7.9	1.2	.49	.57	19	233	192	32	4.1	5.7	4.5
10	7.9	3.7	1.1	.57	.54	19	217	194	28	13	7.2	4.4
11	7.7	3.7	1.1	.59	.50	18	182	206	24	18	6.2	4.3
12	7.3	3.4	1.1	.57	.41	18	154	215	22	18	5.9	4.2
13	7.2	3.7	1.1	.64	.41	17	138	209	20	45	5.4	4.5
14	7.7	3.4	1.2	.57	.43	17	128	200	19	46	6.1	5.0
15	7.9	3.1	1.3	.51	.45	18	128	185	17	34	7.0	5.5
16	7.3	2.5	1.4	.43	.47	16	123	175	16	27	9.7	7.1
17	7.6	1.9	1.3	.44	.49	16	116	165	15	21	7.8	6.9
18	8.0	1.5	1.3	.43	.46	16	125	154	14	17	9.7	7.3
19	8.5	1.2	1.3	.43	.44	19	146	138	13	14	6.9	6.6
20	8.6	1.3	1.1	.43	.42	24	182	126	12	11	5.8	5.7
21	8.5	1.4	.95	.43	.42	31	203	118	11	9.7	5.1	5.0
22	8.6	1.5	.98	.40	.41	47	206	109	10	8.5	4.6	4.5
23	8.7	1.8	1.0	.42	.44	44	181	103	9.7	7.1	4.4	4.3
24	9.2	1.8	1.0	.44	.43	49	167	96	8.6	62	4.2	4.1
25	9.3	1.7	.97	.44	.39	59	217	86	8.2	161	4.1	4.0
26	9.6	1.5	.93	.41	.40	54	227	78	7.2	67	4.0	4.0
27	9.7	1.6	.95	.46	.39	56	236	74	6.9	42	3.8	3.9
28	10	1.6	.91	.50	.41	e75	261	72	7.6	28	3.6	4.0
29	10	1.4	.98	.64	---	100	302	70	6.4	20	3.5	3.8
30	10	1.5	.93	.64	---	81	351	80	5.5	15	3.3	3.6
31	11	---	.96	.61	---	72	---	86	---	12	3.0	---
TOTAL	268.6	106.7	34.26	17.36	13.50	940.68	5472	5458	713.1	732.4	178.9	135.7
MEAN	8.66	3.56	1.11	.56	.48	30.3	182	176	23.8	23.6	5.77	4.52
MAX	11	13	1.4	.90	.64	100	351	361	70	161	10	7.3
MIN	7.2	1.2	.91	.40	.39	.47	65	70	5.5	3.3	3.0	3.3
AC-FT	533	212	68	34	27	1870	10850	10830	1410	1450	355	269

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2001, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	9.35	10.5	4.71	2.33	12.2	68.0	126	171	84.4	17.6	7.60	6.73					
MAX	18.0	36.0	11.5	7.50	110	286	246	388	419	46.0	22.1	19.5					
(WY)	1985	1999	1987	1997	1986	1997	1988	1995	1995	1995	1990	1985					
MIN	3.51	3.56	1.11	.56	.48	15.0	28.5	21.2	5.96	3.76	1.33	.89					
(WY)	1997	2001	2001	2001	2001	1993	1992	1992	1994	1996	2000	1994					

06634620 LITTLE MEDICINE BOW RIVER AT BOLES SPRING, NEAR MEDICINE BOW, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1985 - 2001	
ANNUAL TOTAL	15858.66		14071.20		--	
ANNUAL MEAN	43.3		38.6		43.5 <sup>a</sup>	
HIGHEST ANNUAL MEAN	--		--		90.1	
LOWEST ANNUAL MEAN	--		--		12.7	
HIGHEST DAILY MEAN	1060	Apr 24	361	May 3	1450	Mar 20 1997
LOWEST DAILY MEAN	.61	Jan 7	.39	Feb 25, 27	.12 <sup>b</sup>	Jan 24 1998
ANNUAL SEVEN-DAY MINIMUM	.71	Jan 6	.41	Feb 22	.16	Jan 23 1998
MAXIMUM PEAK FLOW	--		391		9500 <sup>c</sup>	
MAXIMUM PEAK STAGE	--		3.80		14.10 <sup>d</sup>	
ANNUAL RUNOFF (AC-FT)	31460		27910		31490	
10 PERCENT EXCEEDS	131		157		134	
50 PERCENT EXCEEDS	7.7		6.9		8.7	
90 PERCENT EXCEEDS	.97		.55		1.4	

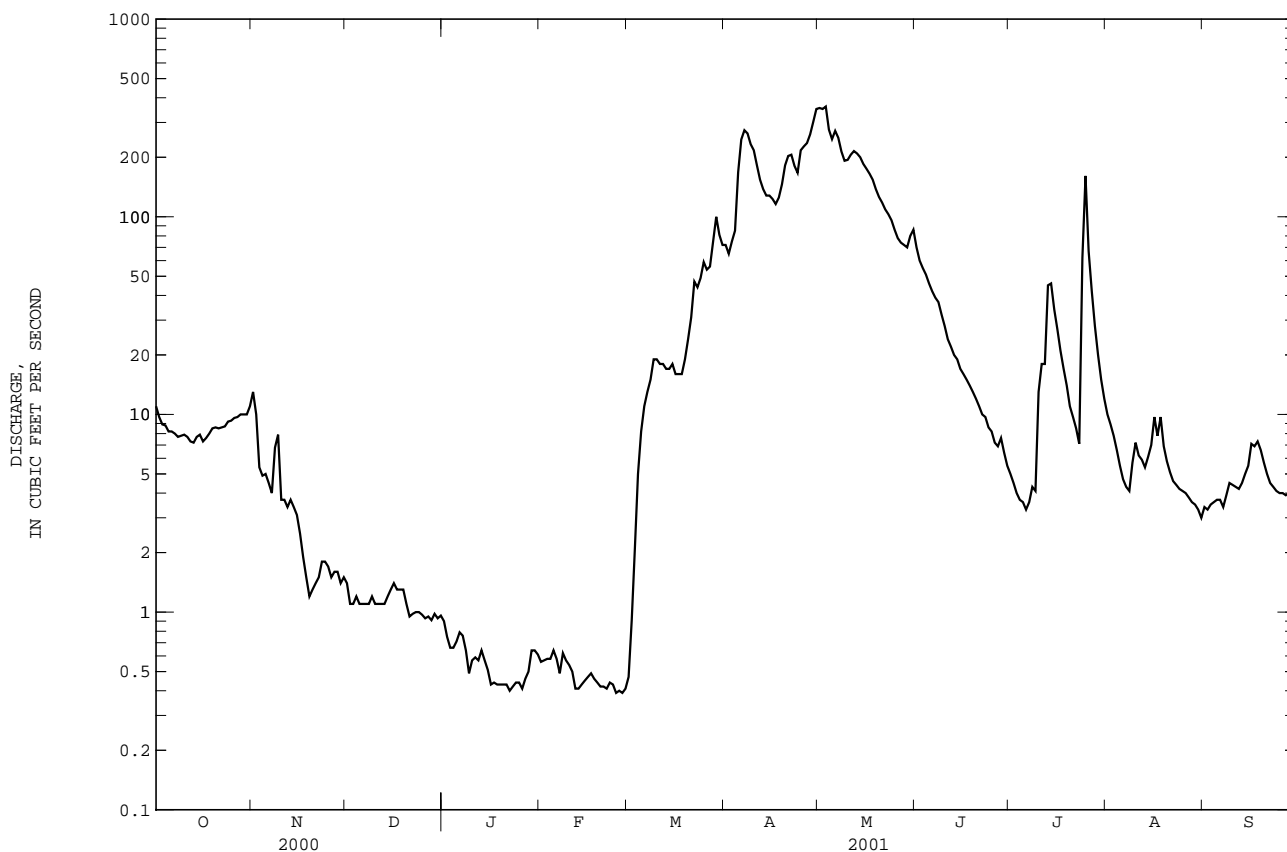
a Average discharge, water years 1974-2001, 52.0 ft<sup>3</sup>/s, unadjusted for flow from Boles Spring.

b No flow at times, water years 1974-84, site and datum then in use.

c From slope-area measurement of peak flow.

d From floodmarks in gage well, site and datum then in use.

e Estimated.



## PLATTE RIVER BASIN

06635000 MEDICINE BOW RIVER ABOVE SEMINOLE RESERVOIR, NEAR HANNA, WY

LOCATION.--Lat 42°00'35", long 106°30'45", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.34, T.24 N., R.81 W., Carbon County, Hydrologic Unit 10180004, on left bank 25 ft upstream from county highway bridge, 2.0 mi upstream from Troublesome Creek, 9.0 mi upstream from high-water line of Seminole Reservoir at elevation 6,357 ft, and 10 mi north of Hanna.

DRAINAGE AREA.--2,338 mi<sup>2</sup>, of which 396 mi<sup>2</sup> probably is non-contributing.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 956: 1941(M). WSP 1440: 1940(M), 1941. WSP 1710: Drainage area. WDR WY-83-1: 1943.

GAGE.--Water-stage recorder. Concrete control since Nov. 20, 1990. Datum of gage is 6,415.40 ft above sea level. State of Wyoming data collection platform with satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Many small reservoirs upstream from station, total capacity, about 6,000 acre-ft, for irrigation. Diversions for irrigation of about 43,000 acres upstream from station.

COOPERATION.--Ten discharge measurements provided by the Wyoming State Engineer's Office and seven discharge measurements provided by the Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	42	e24	e23	e18	e14	226	556	440	21	20	9.5
2	36	33	e24	e21	e19	e13	213	543	434	17	16	8.9
3	35	21	e26	e23	e19	e15	208	565	395	16	11	8.4
4	32	23	e26	e25	e18	e20	218	565	395	15	8.4	8.1
5	30	24	e24	e27	e20	e30	263	436	420	13	6.8	8.3
6	29	24	e23	e26	e19	e40	365	441	374	12	5.7	8.7
7	28	21	e23	e25	e19	e36	436	478	296	11	5.0	8.8
8	27	e20	e24	e22	e16	e42	464	451	230	12	4.6	9.7
9	27	e24	e25	e18	e12	e50	406	395	192	17	7.6	9.6
10	27	e22	e25	e20	e15	e46	361	353	189	18	6.9	8.9
11	28	e20	e22	e22	e17	e40	325	376	199	25	7.3	9.0
12	26	e18	e19	e22	e20	e38	297	447	192	40	9.0	9.6
13	25	e20	e21	e21	e19	e36	264	508	168	30	8.9	9.8
14	26	e24	e22	e20	e18	e47	239	520	152	41	13	10
15	28	e23	e24	e18	e17	e40	230	541	130	62	11	11
16	27	e23	e22	e19	e18	e36	222	594	130	55	13	11
17	27	e23	e24	e17	e21	e40	216	647	100	46	13	12
18	25	e22	e22	e18	e19	e45	213	723	73	48	14	14
19	26	e23	e22	e19	e18	e50	223	713	55	41	11	14
20	27	e21	e22	e19	e19	e60	252	568	45	35	12	14
21	26	e22	e20	e20	e18	e56	303	582	37	32	11	13
22	25	e22	e22	e21	e18	e70	354	609	32	27	9.6	13
23	28	e23	e22	e20	e17	e90	351	539	29	23	8.9	12
24	28	e20	e21	e18	e18	e150	317	425	29	19	8.3	12
25	29	e21	e20	e19	e17	e250	315	333	29	66	8.1	11
26	29	e22	e19	e19	e15	311	427	277	28	126	7.8	11
27	28	e22	e20	e17	e16	435	466	265	31	72	7.4	11
28	28	e23	e22	e18	e14	398	474	289	28	46	7.2	11
29	28	e22	e21	e19	---	298	479	348	24	33	6.9	11
30	29	e25	e22	e18	---	263	506	388	22	26	8.5	11
31	37	---	e23	e17	---	239	---	414	---	22	9.2	---
TOTAL	888	693	696	631	494	3298	9633	14889	4898	1067	297.1	319.3
MEAN	28.6	23.1	22.5	20.4	17.6	106	321	480	163	34.4	9.58	10.6
MAX	37	42	26	27	21	435	506	723	440	126	20	14
MIN	25	18	19	17	12	13	208	265	22	11	4.6	8.1
AC-FT	1760	1370	1380	1250	980	6540	19110	29530	9720	2120	589	633

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)

	MEAN	43.4	51.3	38.7	32.5	49.3	143	328	570	670	179	54.2	29.2
MAX	132	121	72.9	69.0	397	516	950	3059	2076	1030	246	236	
(WY)	1963	1999	1974	1997	1962	1943	1983	1973	1983	1983	1983	1973	
MIN	9.65	16.3	8.70	7.76	10.0	20.4	66.4	81.5	58.6	5.71	1.53	3.78	
(WY)	1957	1940	1979	1979	1949	1944	1995	1954	1954	1939	2000	1956	

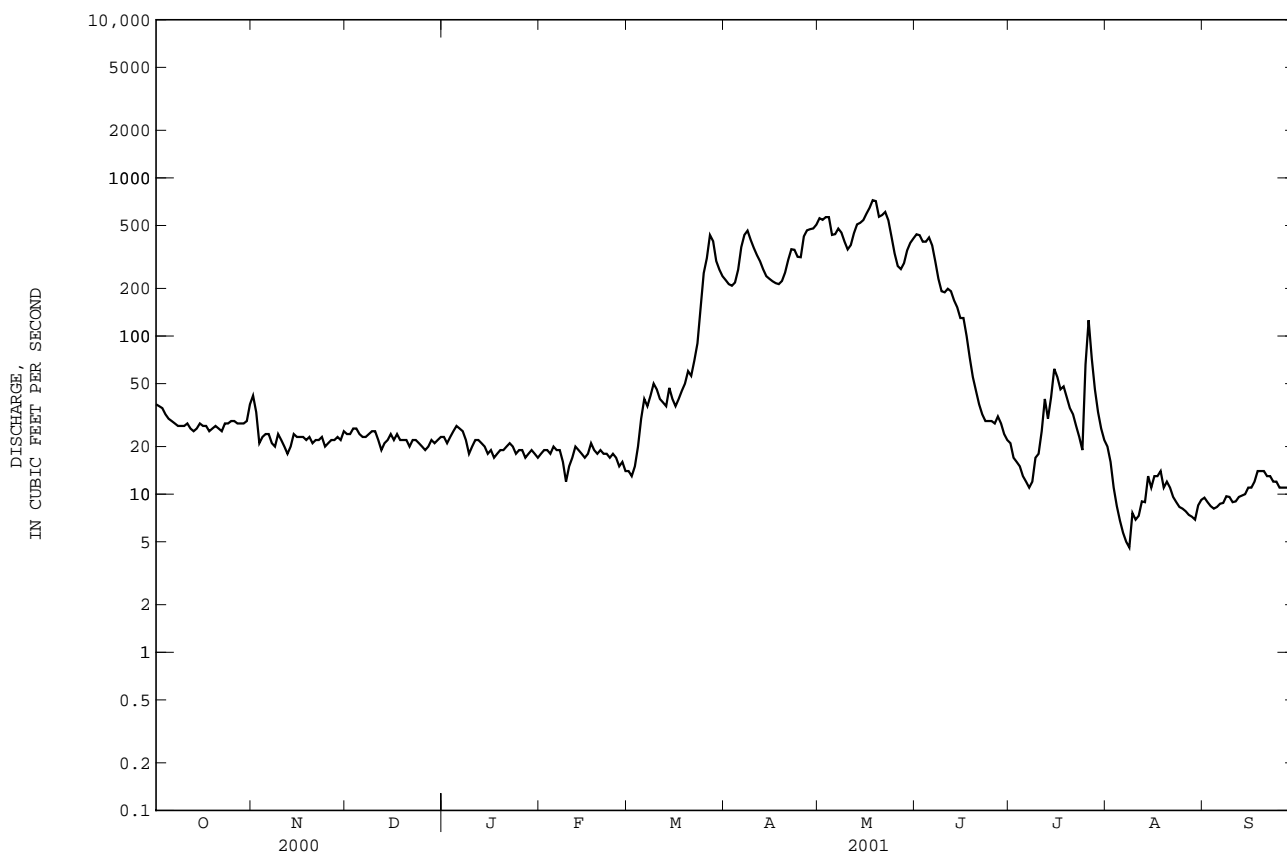
06635000 MEDICINE BOW RIVER ABOVE SEMINOE RESERVOIR, NEAR HANNA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1939 - 2001	
ANNUAL TOTAL	39733.68		37803.4		--	
ANNUAL MEAN	109		104		183	
HIGHEST ANNUAL MEAN	--		--		531	
LOWEST ANNUAL MEAN	--		--		43.7	
HIGHEST DAILY MEAN	1120	Apr 25	723	May 18	5330	May 11 1973
LOWEST DAILY MEAN	.18	Aug 25	4.6	Aug 8	.18	Aug 25 2000
ANNUAL SEVEN-DAY MINIMUM	.33	Aug 19	6.3	Aug 5	.33	Aug 19 2000
MAXIMUM PEAK FLOW	--		976		6010 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		4.08		8.20 <sup>b</sup>	
ANNUAL RUNOFF (AC-FT)	78810		74980		132400	
10 PERCENT EXCEEDS	379		395		534	
50 PERCENT EXCEEDS	37		24		53	
90 PERCENT EXCEEDS	4.2		11		15	

a Gage height, 6.74 ft.

b From floodmarks, backwater from ice.

e Estimated.



## PLATTE RIVER BASIN

06635500 SEMINOE RESERVOIR NEAR LEO, WY

LOCATION.--Lat 42°09'21", long 106°54'29", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.8, T.25 N., R.84 W., Carbon County, Hydrologic Unit 10180003, on upstream side near center of dam on North Platte River, 6.0 mi upstream from high-water line of Pathfinder Reservoir at elevation 5,850.1 ft, and 9.0 mi southwest of Leo.

DRAINAGE AREA.--7,230 mi<sup>2</sup>, of which 589 mi<sup>2</sup> is probably noncontributing.

PERIOD OF RECORD.--February 1939 to current year. Monthend figures only for February, March 1939, October 1940 to September 1950, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,190.00 ft above sea level (levels by Bureau of Reclamation). Prior to Apr. 20, 1939, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-arch dam. Storage began Apr. 1, 1939, but some regulation for power development during period Jan. 1 to Mar. 31, 1939. Capacity, 1,017,000 acre-ft below elevation 6,357 ft, top of spillway gates. Figures given herein represent total contents, of which 31,700 acre-ft, capacity below elevation 6,239 ft, minimum operating level for power development, are not available for power development and 533 acre-ft, below elevation 6,185.09 ft, penstock invert, is dead storage. Water is used for irrigation and power development.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,073,000 acre-ft, June 20, 1949, elevation, 6,359.29 ft; minimum daily contents (since appreciable storage was attained), 19,040 acre-ft, Sept. 1, 1939, elevation, 6,228.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 828,000 acre-ft, Oct. 1, maximum daily elevation, 6,346.98 ft, Oct. 1; minimum daily contents, 619,000 acre-ft, Sept. 29, minimum daily elevation, 6,333.22 ft, Sept. 30.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

6,330	575,000	6,350	883,000
6,340	716,000	6,360	1,080,000

RESERVOIR STORAGE (ACRE-Feet), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

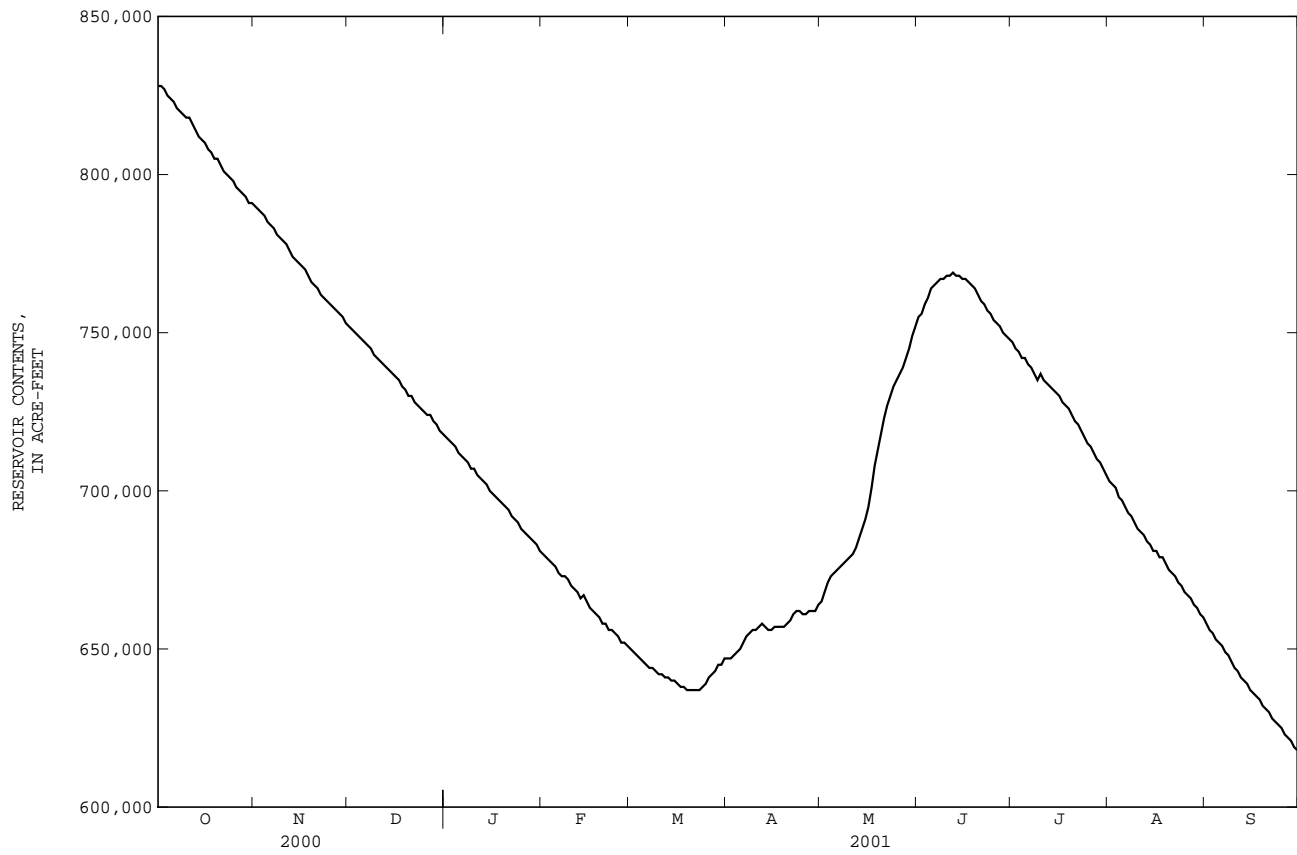
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	828000	790000	752000	717000	680000	650000	647000	665000	755000	747000	703000	658000
2	828000	789000	751000	716000	679000	649000	647000	668000	756000	745000	702000	656000
3	827000	788000	750000	715000	678000	648000	648000	671000	759000	744000	701000	655000
4	825000	787000	749000	714000	677000	647000	649000	673000	761000	742000	698000	653000
5	824000	785000	748000	712000	676000	646000	650000	674000	764000	742000	697000	652000
6	823000	784000	747000	711000	674000	645000	652000	675000	765000	740000	695000	651000
7	821000	783000	746000	710000	673000	644000	654000	676000	766000	739000	693000	649000
8	820000	781000	745000	709000	673000	644000	655000	677000	767000	737000	692000	648000
9	819000	780000	743000	707000	672000	643000	656000	678000	767000	735000	690000	646000
10	818000	779000	742000	707000	670000	642000	656000	679000	768000	737000	688000	644000
11	818000	778000	741000	705000	669000	642000	657000	680000	768000	735000	687000	643000
12	816000	776000	740000	704000	668000	641000	658000	682000	769000	734000	686000	641000
13	814000	774000	739000	703000	666000	641000	657000	685000	768000	733000	684000	640000
14	812000	773000	738000	702000	667000	640000	656000	688000	768000	732000	683000	639000
15	811000	772000	737000	700000	665000	640000	656000	691000	767000	731000	681000	637000
16	810000	771000	736000	699000	663000	639000	657000	695000	767000	730000	681000	636000
17	808000	770000	735000	698000	662000	638000	657000	701000	766000	728000	679000	635000
18	807000	768000	733000	697000	661000	638000	657000	708000	765000	727000	679000	634000
19	805000	766000	732000	696000	660000	637000	657000	713000	764000	726000	677000	632000
20	805000	765000	730000	695000	658000	637000	658000	718000	762000	724000	675000	631000
21	803000	764000	730000	694000	658000	637000	659000	723000	760000	722000	674000	630000
22	801000	762000	728000	692000	656000	637000	661000	727000	759000	721000	673000	628000
23	800000	761000	727000	691000	656000	637000	662000	730000	757000	719000	671000	627000
24	799000	760000	726000	690000	655000	638000	662000	733000	756000	717000	670000	626000
25	798000	759000	725000	688000	654000	639000	661000	735000	754000	715000	668000	625000
26	796000	758000	724000	687000	652000	641000	661000	737000	753000	714000	667000	623000
27	795000	757000	724000	686000	652000	642000	662000	739000	752000	712000	666000	622000
28	794000	756000	722000	685000	651000	643000	662000	742000	750000	710000	664000	621000
29	793000	755000	721000	684000	---	645000	662000	745000	749000	709000	663000	619000
30	791000	753000	719000	683000	---	645000	664000	749000	748000	707000	661000	618000
31	791000	---	718000	681000	---	647000	---	752000	---	705000	660000	---
MAX	828000	790000	752000	717000	680000	650000	664000	752000	769000	747000	703000	658000
MIN	791000	753000	718000	681000	651000	637000	647000	665000	748000	705000	660000	618000
(#)	6344.73	6342.42	6340.18	6337.72	6335.61	6335.31	6336.52	6342.31	6342.07	6339.31	6336.22	6333.22
(*)	-3,800	-3,800	-3,500	-3,700	-30,000	-4,000	+17,000	+88,000	-4,000	-43,000	-45,000	-42,000

WTR YR 2001 MAX 854,000 MIN 619,000 (\*) -209,000

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.

06635500 SEMINOE RESERVOIR NEAR LEO, WY--Continued



## PLATTE RIVER BASIN

06639000 SWEETWATER RIVER NEAR ALCOVA, WY

LOCATION.--Lat 42°29'24", long 107°08'00", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.16, T.29 N., R.86 W., Natrona County, Hydrologic Unit 10180006, on left bank 270 ft upstream from State Highway 220, 0.2 mi southwest of Independence Rock, 7 mi upstream from high-water line of Pathfinder Reservoir at elevation 5,850 ft, and 22 mi southwest of Alcovia.

DRAINAGE AREA.--2,338 mi<sup>2</sup>. Area at site prior to Apr. 1, 1992, 2,327 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1913 to September 1924, October 1938 to current year (no winter records during 1974, 1975, 1977-81, and since 1983). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1921, 1923-24. WSP 1710: Drainage area.

GAGE.--Water-stage recorder and sharp-crested weir. Elevation of gage is 5,890 ft above sea level, from topographic map. Aug. 28, 1913, to Sept. 30, 1924, nonrecording gages at site 7.0 mi upstream at different datums. Oct. 1, 1938, to Mar. 31, 1992, at site 6.6 mi upstream at different datum. Bureau of Reclamation data collection platform with satellite telemetry at station.

REMARKS.--Records good. Several small reservoirs upstream from station, combined capacity, about 5,000 acre-ft, for irrigation. Diversions for irrigation of about 24,000 acres upstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	151	189	76	13	12	9.5
2	---	---	---	---	---	---	176	190	70	12	12	9.2
3	---	---	---	---	---	---	174	184	70	11	12	9.3
4	---	---	---	---	---	---	190	178	68	11	11	9.3
5	---	---	---	---	---	---	182	173	58	11	11	8.8
6	---	---	---	---	---	---	191	167	55	11	11	8.8
7	---	---	---	---	---	---	194	158	54	11	10	9.9
8	---	---	---	---	---	---	188	147	51	15	11	14
9	---	---	---	---	---	---	184	146	49	15	10	12
10	---	---	---	---	---	---	174	145	46	20	11	12
11	---	---	---	---	---	---	167	135	41	23	11	12
12	---	---	---	---	---	---	157	115	39	23	10	12
13	---	---	---	---	---	---	151	104	34	25	10	12
14	---	---	---	---	---	---	142	97	33	22	10	14
15	---	---	---	---	---	---	132	90	32	26	11	16
16	---	---	---	---	---	---	126	88	30	29	11	16
17	---	---	---	---	---	---	120	86	30	29	11	15
18	---	---	---	---	---	---	116	94	30	27	10	15
19	---	---	---	---	---	---	111	108	30	26	10	16
20	---	---	---	---	---	---	111	127	28	25	10	15
21	---	---	---	---	---	---	114	181	24	24	9.7	16
22	---	---	---	---	---	---	146	166	23	22	9.6	16
23	---	---	---	---	---	---	219	152	19	23	9.3	16
24	---	---	---	---	---	---	226	143	17	21	9.0	16
25	---	---	---	---	---	---	204	133	15	19	9.1	15
26	---	---	---	---	---	---	183	116	15	18	9.2	15
27	---	---	---	---	---	---	173	108	16	18	9.0	14
28	---	---	---	---	---	---	166	104	15	16	9.3	15
29	---	---	---	---	---	---	171	102	14	15	8.9	15
30	---	---	---	---	---	---	186	100	14	14	8.7	15
31	---	---	---	---	---	---	---	84	---	12	8.6	---
TOTAL	---	---	---	---	---	---	4925	4110	1096	587	315.4	398.8
MEAN	---	---	---	---	---	---	164	133	36.5	18.9	10.2	13.3
MAX	---	---	---	---	---	---	226	190	76	29	12	16
MIN	---	---	---	---	---	---	111	84	14	11	8.6	8.8
AC-FT	---	---	---	---	---	---	9770	8150	2170	1160	626	791

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2001, BY WATER YEAR (WY)\*

MEAN	45.8	50.2	38.7	31.6	36.9	80.0	248	413	391	110	42.2	29.8
MAX	86.6	83.3	59.4	54.5	69.1	210	1869	1296	1130	436	104	114
(WY)	1916	1972	1972	1953	1968	1916	1924	1980	1983	1995	1998	1973
MIN	16.0	20.0	20.0	10.8	12.3	33.0	74.4	20.7	12.6	5.01	.92	1.90
(WY)	1941	1961	1941	1962	1949	1924	1963	1940	1977	1940	1940	1940



06639000 SWEETWATER RIVER NEAR ALCOVA, WY--Continued

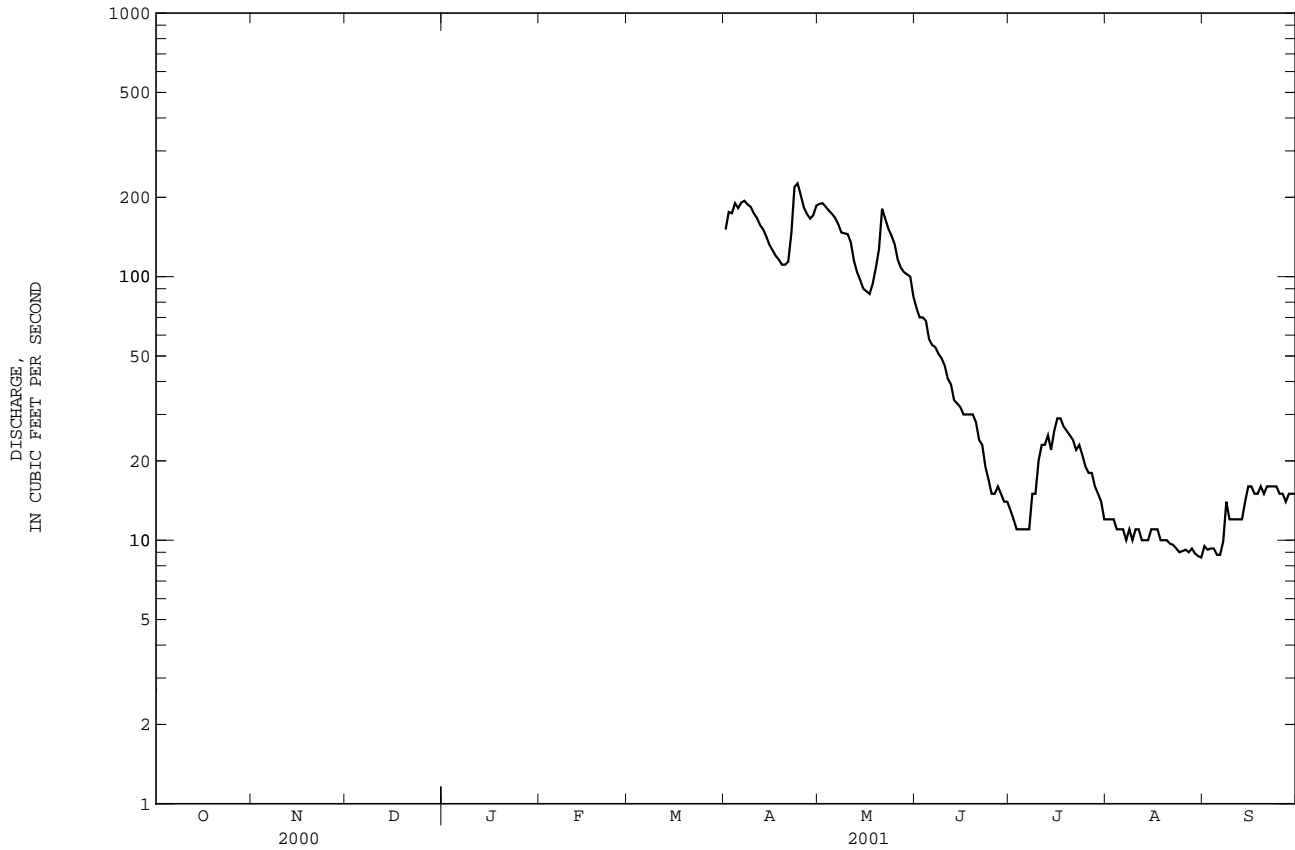
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1914 - 2001\*

HIGHEST DAILY MEAN  
LOWEST DAILY MEAN226 Apr 24  
8.6 Aug 314290 Apr 13 1924  
.50 Jul 30 toMAXIMUM PEAK FLOW  
MAXIMUM PEAK STAGE237 Apr 23  
2.73 Apr 234290 Aug 12 1940  
9.90 Apr 13 1924  
Apr 27 1983

\* For period of operation.



## PLATTE RIVER BASIN

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY

LOCATION.--Lat 42°28'06", long 106°51'12", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.24, T.29 N., R.84 W., Natrona County, Hydrologic Unit 10180003, in gatehouse near left end of dam on North Platte River and 9.0 mi southwest of Alcova.

DRAINAGE AREA.--10,711 mi<sup>2</sup>, of which 700 mi<sup>2</sup> probably is non-contributing.

PERIOD OF RECORD.--January 1909 to current year. Month end figures only for some periods, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,678.1 ft above sea level. Prior to Apr. 12, 1950, nonrecording gages near present site, and Apr. 12 to Sept. 30, 1950, water-stage recorder at present site, all at Bureau of Reclamation datum which was 1.9 ft lower.

REMARKS.--Reservoir is formed by masonry dam. Storage began in April 1909. Capacity, 1,016,000 acre-ft between elevations 5,668.1 ft, north outlet trashrack sill, and 5,850.1 ft, crest of spillway. No dead storage. Figures given herein represent total contents. Water is used to irrigate lands in Wyoming and Nebraska under the North Platte project. Since December 1960, water has been diverted directly through a tunnel to Fremont Canyon Powerplant, bypassing a section of river channel immediately below Pathfinder Dam.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 1,182,000 acre-ft, June 25-27, 1917, elevation, 5,858.86 ft, present datum; no storage at times during 1909-12, 1931, 1958-59.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 799,000 acre-ft, June 3-4, maximum daily elevation, 5,839.43 ft, June 4; minimum daily contents, 423,000 acre-ft, Sept. 28-29, minimum daily elevation, 5,813.51 ft., Sept. 28.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

5,810	387,000	5,825	565,000
5,815	440,000	5,830	638,000
5,820	499,000	5,835	720,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

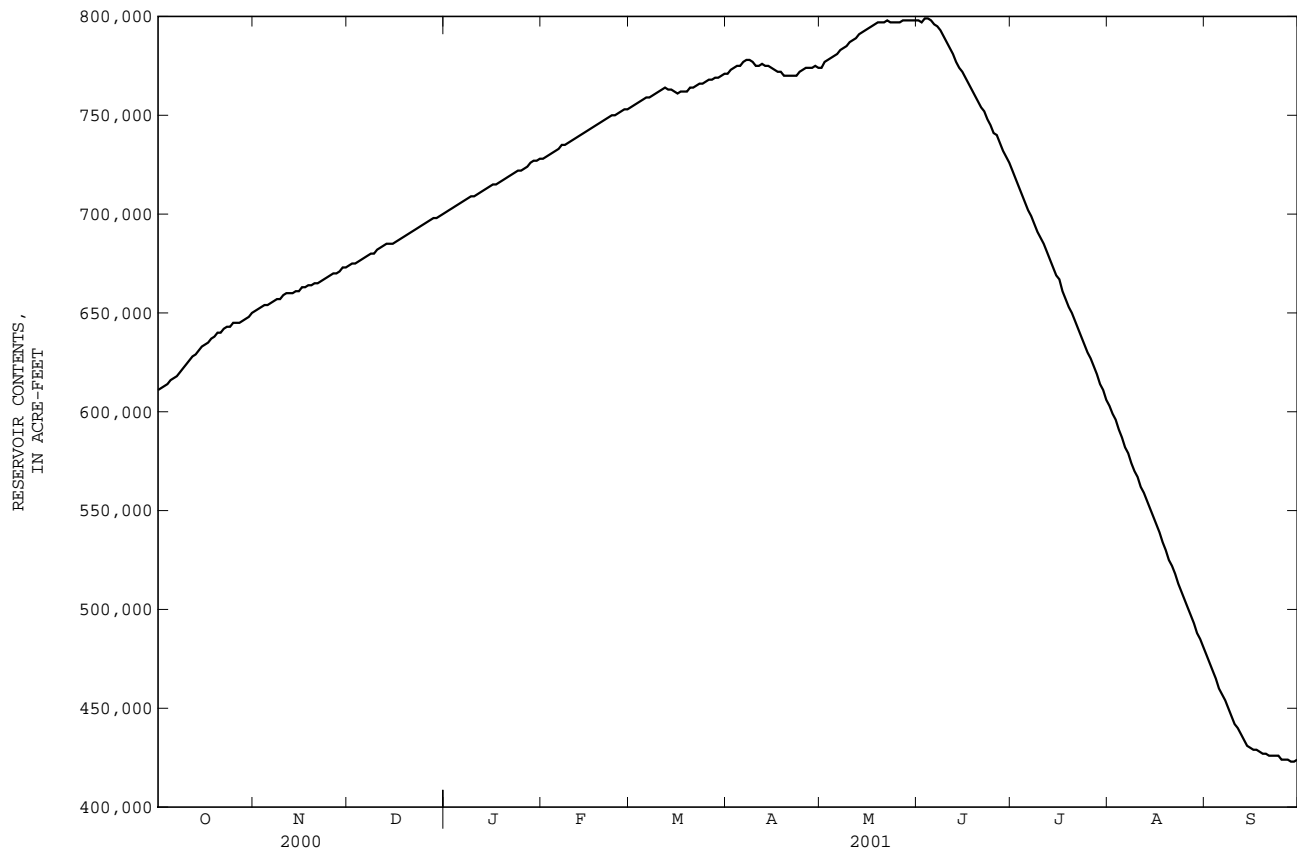
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	611000	651000	674000	701000	728000	754000	771000	774000	798000	722000	603000	477000
2	612000	652000	675000	702000	729000	755000	773000	777000	797000	718000	599000	473000
3	613000	653000	675000	703000	730000	756000	774000	778000	799000	714000	596000	469000
4	614000	654000	676000	704000	731000	757000	775000	779000	799000	710000	591000	465000
5	616000	654000	677000	705000	732000	758000	775000	780000	798000	706000	587000	460000
6	617000	655000	678000	706000	733000	759000	777000	781000	796000	702000	582000	457000
7	618000	656000	679000	707000	735000	759000	778000	783000	795000	699000	579000	454000
8	620000	657000	680000	708000	735000	760000	778000	784000	793000	695000	574000	450000
9	622000	657000	680000	709000	736000	761000	777000	785000	790000	691000	570000	446000
10	624000	659000	682000	709000	737000	762000	775000	787000	787000	688000	567000	442000
11	626000	660000	683000	710000	738000	763000	775000	788000	784000	685000	562000	440000
12	628000	660000	684000	711000	739000	764000	776000	789000	781000	681000	559000	437000
13	629000	660000	685000	712000	740000	763000	775000	791000	777000	677000	555000	434000
14	631000	661000	685000	713000	741000	763000	775000	792000	774000	673000	551000	431000
15	633000	661000	685000	714000	742000	762000	774000	793000	772000	669000	547000	430000
16	634000	663000	686000	715000	743000	761000	773000	794000	769000	667000	543000	429000
17	635000	663000	687000	715000	744000	762000	772000	795000	766000	661000	539000	429000
18	637000	664000	688000	716000	745000	762000	772000	796000	763000	657000	534000	428000
19	638000	664000	689000	717000	746000	762000	770000	797000	760000	653000	530000	427000
20	640000	665000	690000	718000	747000	764000	770000	797000	757000	650000	525000	427000
21	640000	665000	691000	719000	748000	764000	770000	797000	754000	646000	522000	426000
22	642000	666000	692000	720000	749000	765000	770000	798000	752000	642000	518000	426000
23	643000	667000	693000	721000	750000	766000	770000	797000	748000	638000	513000	426000
24	643000	668000	694000	722000	750000	766000	772000	797000	745000	634000	509000	426000
25	645000	669000	695000	722000	751000	767000	773000	797000	741000	630000	505000	424000
26	645000	670000	696000	723000	752000	768000	774000	797000	740000	627000	501000	424000
27	645000	670000	697000	724000	753000	768000	774000	798000	736000	623000	497000	424000
28	646000	671000	698000	726000	753000	769000	774000	798000	732000	619000	493000	423000
29	647000	673000	698000	727000	---	769000	775000	798000	729000	614000	488000	423000
30	648000	673000	699000	727000	---	770000	774000	798000	726000	611000	485000	424000
31	650000	---	700000	728000	---	771000	---	798000	---	606000	481000	---
MAX	650000	673000	700000	728000	753000	771000	778000	798000	799000	722000	603000	477000
MIN	611000	651000	674000	701000	728000	754000	770000	774000	726000	606000	481000	423000
(#)	5830.73	5,832.16	5,833.84	5,835.46	5,836.90	5,837.88	5,838.07	5,839.35	5,835.33	5,827.88	5,818.50	5,813.55
(*)	+40,000	+23,000	+27,000	+28,000	+25,000	+18,000	+3,000	+24,000	-72,000	-120,000	-125,000	-57,000

WTR YR 2001 MAX 799,000 MIN 423,000 (\*) -473,000

(#) Elevation, in feet, at end of month.

(\*) Change in content, in acre-feet.

06640500 PATHFINDER RESERVOIR NEAR ALCOVA, WY--Continued



## PLATTE RIVER BASIN

06641500 ALCOVA RESERVOIR AT ALCOVA, WY

LOCATION.--Lat 42°32'52", long 106°43'08", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.24, T.30 N., R.83 W., Natrona County, Hydrologic Unit 10180007, in elevator shaft at right end of dam on North Platte River and 0.2 mi southwest of Alcova.

DRAINAGE AREA.--10,766 mi<sup>2</sup>, of which 700 mi<sup>2</sup> probably is non-contributing.

PERIOD OF RECORD.--February 1938 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 5,447.00 ft. Datum of gage is 5,320 ft above sea level (levels by Bureau of Reclamation). Prior to June 27, 1955, nonrecording gages near present site at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in January 1938; storage began Feb. 8, 1938. Capacity, 184,300 acre-ft at elevation 5,500.00 ft, top of spillway gates. Dead storage, 100 acre-ft. Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in North Platte River basin.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 190,000 acre-ft, Aug. 14, 15, 1952, elevation, 5,499.92 ft; minimum daily contents (since appreciable storage was attained), 2,000 acre-ft, Sept. 30, 1940, elevation, 5,353.56 ft. No usable storage prior to February 1938.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 181,000 acre-ft, June 11-29, maximum daily elevation, 5,498.81 ft, June 18; minimum daily contents, 155,000 acre-ft, Nov. 11; minimum daily elevation, 5,487.70 ft, Nov. 11.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

5,485	149,000	5,495	172,000
5,490	160,000	5,500	184,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

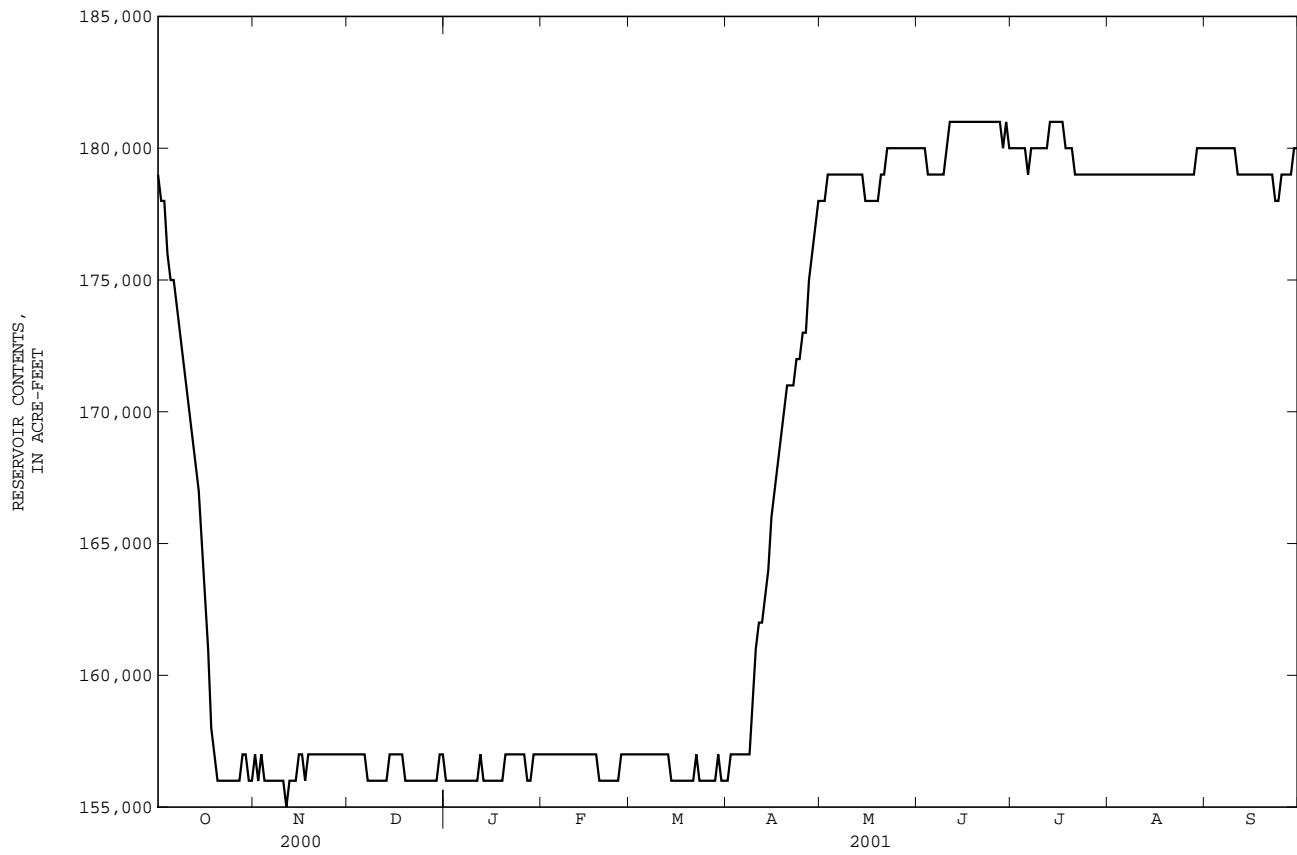
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179000	157000	157000	156000	157000	157000	156000	178000	180000	180000	179000	180000
2	178000	156000	157000	156000	157000	157000	157000	178000	180000	180000	179000	180000
3	178000	157000	157000	156000	157000	157000	157000	179000	180000	180000	179000	180000
4	176000	156000	157000	156000	157000	157000	157000	179000	179000	180000	179000	180000
5	175000	156000	157000	156000	157000	157000	157000	179000	179000	180000	179000	180000
6	175000	156000	157000	156000	157000	157000	157000	179000	179000	179000	179000	180000
7	174000	156000	156000	156000	157000	157000	157000	179000	179000	180000	179000	180000
8	173000	156000	156000	156000	157000	157000	157000	179000	179000	180000	179000	180000
9	172000	156000	156000	156000	157000	157000	159000	179000	179000	180000	179000	180000
10	171000	156000	156000	156000	157000	157000	161000	179000	180000	180000	179000	180000
11	170000	155000	156000	156000	157000	157000	162000	179000	181000	180000	179000	179000
12	169000	156000	156000	157000	157000	157000	162000	179000	181000	180000	179000	179000
13	168000	156000	156000	156000	157000	157000	163000	179000	181000	181000	179000	179000
14	167000	156000	157000	156000	157000	156000	164000	179000	181000	181000	179000	179000
15	165000	157000	157000	156000	157000	156000	166000	178000	181000	181000	179000	179000
16	163000	157000	157000	156000	157000	156000	167000	178000	181000	181000	179000	179000
17	161000	156000	157000	156000	157000	156000	168000	178000	181000	181000	179000	179000
18	158000	157000	157000	156000	157000	156000	169000	178000	181000	180000	179000	179000
19	157000	157000	156000	156000	156000	156000	170000	178000	181000	180000	179000	179000
20	156000	157000	156000	157000	156000	156000	171000	179000	181000	180000	179000	179000
21	156000	157000	156000	157000	156000	156000	171000	179000	181000	179000	179000	179000
22	156000	157000	156000	157000	156000	157000	171000	180000	181000	179000	179000	179000
23	156000	157000	156000	157000	156000	156000	172000	180000	181000	179000	179000	178000
24	156000	157000	156000	157000	156000	156000	172000	180000	181000	179000	179000	178000
25	156000	157000	156000	157000	156000	156000	173000	180000	181000	179000	179000	179000
26	156000	157000	156000	157000	157000	156000	173000	180000	181000	179000	179000	179000
27	156000	157000	156000	156000	157000	156000	175000	180000	181000	179000	179000	179000
28	157000	157000	156000	156000	157000	156000	176000	180000	180000	179000	179000	179000
29	157000	157000	156000	157000	---	157000	177000	180000	181000	179000	180000	180000
30	156000	157000	157000	157000	---	156000	178000	180000	180000	179000	180000	180000
31	156000	---	157000	157000	---	156000	---	180000	---	179000	180000	---
MAX	179000	157000	157000	157000	157000	157000	178000	180000	181000	181000	180000	180000
MIN	156000	155000	156000	156000	156000	156000	156000	178000	179000	179000	179000	178000
(#)	5,488.20	5,488.21	5,488.37	5,497.55	5,498.41	5,498.06	5,488.53	5,488.29	5,488.20	5,498.26	5,497.85	5,498.30
(*)	-24,000	1,000	0	0	0	-1,000	+22,000	2,000	0	-1,000	1,000	0

WTR YR 2001 MAX 181,000 MIN 155,000 (\*) 0

(#) Elevation, in feet, at end of month.

(\*) Change in contents, in acre-feet.

06641500 ALCOVA RESERVOIR AT ALCOVA, WY--Continued



06645000 NORTH PLATTE RIVER BELOW CASPER, WY

LOCATION.--Lat 42°51'40", long 106°12'53", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.4, T.33 N., R.78 W., Natrona County, Hydrologic Unit 10180007, at New Mystery Bridge, 0.1 mi upstream from Claude Creek, 0.6 mi north of U.S. Highways 20 and 87, 5.8 mi east of city hall in Casper, and 9.5 mi downstream from Casper Creek.

DRAINAGE AREA.--12,574 mi<sup>2</sup>, of which 831 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--Water years 1947-52, 1957-59, 1968-89, October 1990 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
DEC 28...	1050	728	644	9.9	80	8.0	708	.5	.00	.072	.364	.016	.021	
MAR 30...	1315	887	628	12.1	120	8.0	691	5.5	6.5	.126	.255	.015	.035	
JUN 26...	0945	3500	636	8.3	101	8.3	492	17.0	16.0	<.040	.059	.008	E.017	
AUG 28...	1005	2580	635	8.0	102	8.1	497	21.0	18.0	<.040	E.035	<.006	E.013	
DATE		ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
DEC 28...	2	.17	2.0	51.9	<.06	86	<.04	.19	1.6	<10	<.08	40.8	11.4	
MAR 30...	2	<.05	2.5	48.1	<.06	78	.05	.15	2.0	<10	<.08	29.1	13.9	
JUN 26...	1	.14	2.1	45.1	<.06	51	<.04	.15	1.6	<10	<.08	25.8	3.2	
AUG 28...	3	.14	2.0	55.6	<.06	51	.21	.12	2.1	<10	<.08	22.9	4.1	
DATE		MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)			
DEC 28...		<.23	2.7	.75	4.4	<1.0	693	<8.0	1	<1	9.19			
MAR 30...		<.23	2.4	.68	4.5	<1.0	556	<8.0	4	<1	9.15			
JUN 26...		<.23	2.4	1.18	1.3	<1.0	409	E5.7	1	<1	6.12			
AUG 28...		<.01	2.4	<.06	1.0	<1.0	388	<8.0	5	2	6.22			

E -- Estimated value.

06646000 DEER CREEK IN CANYON, NEAR GLENROCK, WY

LOCATION.--Lat 42°42'42", long 106°01'43", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.26, T.32 N., R.77 W., Converse County, Hydrologic Unit 10180007, on left bank 500 ft upstream from VR Ditch and 14 mi southwest of Glenrock.

DRAINAGE AREA.--139 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1946 to September 1951, March 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,640 ft above sea level, from topographic map. May 1946 to September 1951, at same site and datum.

REMARKS.--Records good except those for April to July, and those for estimated daily discharges, which are poor. No diversion upstream from station. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 12, 1970, reached a discharge of 14,200 ft<sup>3</sup>/s at Deer Creek below Millar Wasteway, at Glenrock (station 06646600), 16.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	e12	14	13	e14	44	528	70	10	9.1	5.1
2	10	13	e12	14	13	e13	52	475	60	8.9	8.8	5.3
3	9.6	e11	12	13	13	e14	71	390	58	9.0	8.4	5.3
4	9.8	e12	12	13	13	e14	96	398	59	8.8	8.0	5.0
5	10	12	e12	14	13	14	122	381	60	6.9	7.8	4.8
6	10	13	e13	14	13	14	186	339	49	7.0	7.4	4.7
7	10	13	13	e13	e13	16	179	291	44	6.8	9.0	5.3
8	10	15	13	e14	e12	17	168	e250	43	8.3	7.7	12
9	9.9	13	13	14	e11	18	142	e280	39	32	15	12
10	9.9	14	e12	14	e12	19	128	e290	35	162	14	11
11	10	14	e13	14	e13	18	108	e300	33	181	10	8.9
12	e10	14	e14	14	e13	19	98	e310	31	63	8.9	7.8
13	e10	14	14	14	e13	18	97	309	30	58	8.0	7.1
14	e10	14	14	e14	e13	18	92	297	31	43	7.4	7.6
15	e11	14	13	e13	e13	20	91	281	35	38	8.1	11
16	e12	15	13	e13	e13	23	99	264	28	33	8.4	10
17	11	14	13	e12	e13	21	108	216	24	27	8.4	9.1
18	10	14	13	13	e13	20	173	181	23	24	7.7	9.3
19	10	13	13	13	e13	19	286	159	23	21	7.0	8.4
20	9.9	13	14	13	e13	23	329	140	22	19	6.5	7.6
21	9.9	13	14	13	e13	27	250	139	21	18	6.5	7.2
22	10	12	14	13	13	e30	204	128	20	17	6.3	6.8
23	10	12	14	13	14	e35	182	102	18	16	6.2	6.8
24	10	12	14	14	14	e40	256	87	17	18	5.9	6.8
25	10	12	14	13	e13	e44	353	75	16	18	5.8	6.6
26	11	12	14	13	e13	48	428	69	15	15	5.6	6.5
27	11	12	14	13	e13	56	503	67	16	14	5.4	6.4
28	11	13	14	13	e12	48	615	92	16	13	5.3	6.4
29	11	e12	14	13	---	51	678	111	13	12	5.2	6.3
30	10	12	14	13	---	48	561	124	12	11	5.1	6.5
31	11	---	14	13	---	45	---	85	---	9.5	5.1	---
TOTAL	319.0	391	412	414	361	824	6699	7158	961	928.2	238.0	223.6
MEAN	10.3	13.0	13.3	13.4	12.9	26.6	223	231	32.0	29.9	7.68	7.45
MAX	12	15	14	14	14	56	678	528	70	181	15	12
MIN	9.6	11	12	12	11	13	44	67	12	6.8	5.1	4.7
AC-FT	633	776	817	821	716	1630	13290	14200	1910	1840	472	444

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

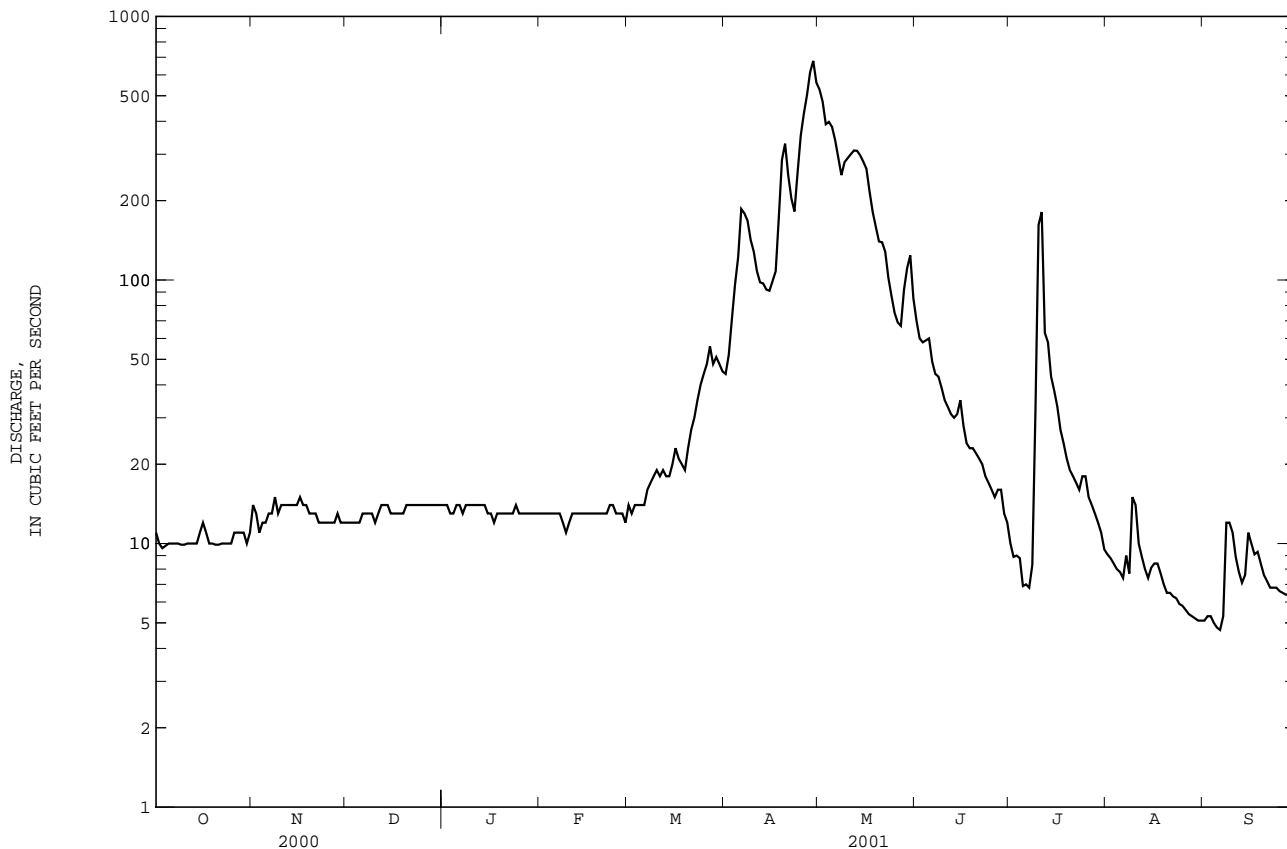
	MEAN	11.3	14.6	10.5	9.38	10.2	35.0	194	272	88.5	15.7	6.08	6.00
MAX	64.1	73.9	34.2	26.0	21.5	92.4	352	805	435	57.4	15.5	11.8	
(WY)	1999	1999	1996	1997	1997	1999	1987	1995	1995	1947	1997	1997	
MIN	3.85	6.04	3.38	3.85	3.44	9.77	44.8	46.5	14.2	3.04	2.47	2.10	
(WY)	1990	1993	1991	1991	1947	1950	1989	1989	1989	1989	1989	1990	

## PLATTE RIVER BASIN

06646000 DEER CREEK IN CANYON, NEAR GLENROCK, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1946 - 2001	
ANNUAL TOTAL	20658.3		18928.8		--	
ANNUAL MEAN	56.4		51.9		57.5	
HIGHEST ANNUAL MEAN	--		--		124	
LOWEST ANNUAL MEAN	--		--		13.9	
HIGHEST DAILY MEAN	581	Apr 23	678	Apr 29	1920	Jun 10 1986
LOWEST DAILY MEAN	4.4	Sep 11,12	4.7	Sep 6	1.1	Sep 17 1990
ANNUAL SEVEN-DAY MINIMUM	4.7	Aug 10	5.0	Aug 31	1.4	Sep 12 1990
MAXIMUM PEAK FLOW	--		845	Apr 28	3200	Jun 10 1986
MAXIMUM PEAK STAGE	--		6.45	Apr 28	9.42	Jun 10 1986
ANNUAL RUNOFF (AC-FT)	40980		37550		41620	
10 PERCENT EXCEEDS	218		160		169	
50 PERCENT EXCEEDS	13		13		11	
90 PERCENT EXCEEDS	5.8		7.5		4.0	

e Estimated.





06647500 BOX ELDER CREEK AT BOXELDER, WY

LOCATION.--Lat 42°36'44", long 105°51'29", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.32, T.31 N., R.75 W., Converse County, Hydrologic Unit 10180007, on left bank at Echo Mountain Ranch (old Boxelder Post Office), 0.8 mi downstream from Snowshoe Creek, and 17 mi south of Glenrock.

DRAINAGE AREA.--63.0 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1946 to September 1951, October 1961 to September 1967, October 1971 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,710 ft above sea level, from topographic map. Prior to June 7, 1946, non-recording gage, and June 8, 1946, to July 21, 1976, water-stage recorder at site 400 ft downstream at different datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 60 acres, of which about 40 acres are downstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.0	2.7	e3.0	e2.6	e2.8	20	330	39	5.4	e2.0	.21
2	3.2	e3.5	2.6	e2.9	e2.6	e2.5	25	303	35	4.8	e1.8	.20
3	2.9	e3.0	2.7	2.9	e2.6	e2.6	34	247	33	4.6	e1.6	.16
4	2.6	e3.1	2.7	3.0	e2.6	2.7	45	232	34	4.3	e1.5	.16
5	2.8	3.2	2.7	3.1	e2.6	2.9	57	220	33	e4.0	e1.4	.15
6	2.8	3.1	2.9	3.3	e2.6	3.9	77	208	26	3.7	e1.3	.12
7	2.6	3.1	3.0	3.3	e2.5	4.4	79	187	24	3.6	e1.2	e.15
8	2.5	3.2	3.0	3.3	e2.4	4.5	74	186	21	6.3	e1.3	e.25
9	2.5	3.2	3.0	3.1	e2.3	4.5	66	203	19	22	e1.8	e.40
10	2.6	3.3	2.9	2.9	e2.5	4.9	63	227	17	26	e2.5	e.60
11	2.5	3.1	3.0	2.9	e2.6	4.8	58	248	15	41	e1.0	e1.0
12	2.4	2.8	2.8	2.9	e2.6	4.9	59	261	14	22	e.80	e.80
13	2.2	2.6	2.8	3.0	e2.5	4.8	55	269	13	21	e.64	e.70
14	2.2	2.8	2.8	3.0	e2.4	4.9	53	274	13	17	e.54	e.80
15	2.5	3.1	2.9	3.0	e2.4	5.3	52	267	14	16	e.60	e1.0
16	2.9	3.1	2.9	e2.9	e2.5	6.3	53	253	12	14	e.45	e1.0
17	2.7	2.9	2.8	e2.8	e2.5	6.1	58	215	10	11	e.40	e1.1
18	2.6	2.7	e2.7	e2.9	e2.6	5.5	80	180	9.0	9.2	e.37	e.90
19	2.4	2.7	e2.8	e2.9	2.6	5.7	110	152	8.9	8.1	e.33	e.70
20	2.3	2.6	e2.8	e3.0	2.7	7.5	121	133	9.7	7.2	e.30	e.60
21	2.3	2.7	e2.6	e3.1	2.8	12	107	123	9.5	6.4	e.28	e.55
22	2.4	2.7	e2.8	e3.5	2.8	16	98	105	9.0	5.7	e.26	e.50
23	2.5	2.7	e3.0	e3.4	3.3	20	103	89	8.2	5.2	e.25	e.48
24	2.5	2.7	e3.0	e3.0	e3.0	22	116	76	7.5	7.2	e.24	e.49
25	2.6	2.7	e2.8	e2.8	e2.8	21	145	67	7.2	5.4	e.23	e.43
26	2.8	2.6	e2.8	e2.7	e2.9	26	176	61	7.5	4.3	e.22	e.42
27	2.9	2.8	3.6	e2.7	e2.9	24	216	60	9.3	4.0	e.21	e.41
28	2.8	2.9	3.8	e2.6	e2.7	26	266	70	8.3	3.7	e.21	e.40
29	2.7	2.8	e3.4	e2.7	---	24	314	58	7.0	3.3	e.21	e.40
30	2.5	2.8	e3.2	e2.7	---	21	316	55	6.1	e2.7	.20	e.40
31	2.6	---	e3.1	e2.7	---	21	---	46	---	e2.3	.21	---
TOTAL	81.8	88.5	90.6	92.0	73.9	324.5	3096	5405	479.2	301.4	24.35	15.48
MEAN	2.64	2.95	2.92	2.97	2.64	10.5	103	174	16.0	9.72	.79	.52
MAX	4.0	4.0	3.8	3.5	3.3	26	316	330	39	41	2.5	1.1
MIN	2.2	2.6	2.6	2.6	2.3	2.5	20	46	6.1	2.3	.20	.12
AC-FT	162	176	180	182	147	644	6140	10720	950	598	48	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

	MEAN	2.70	3.82	2.86	2.53	2.82	9.18	80.9	240	78.7	9.02	1.70	.88
MAX	20.8	29.7	15.0	8.12	9.25	31.8	220	562	332	48.8	12.3	4.11	
(WY)	1999	1999	1996	1997	1962	1997	1962	1973	1995	1947	1998	1973	
MIN	.24	.60	.46	.66	.093	1.47	9.33	39.5	8.28	.21	.021	.058	
(WY)	1965	1964	1964	1981	1966	1981	1981	1989	1985	1989	1989	1981	

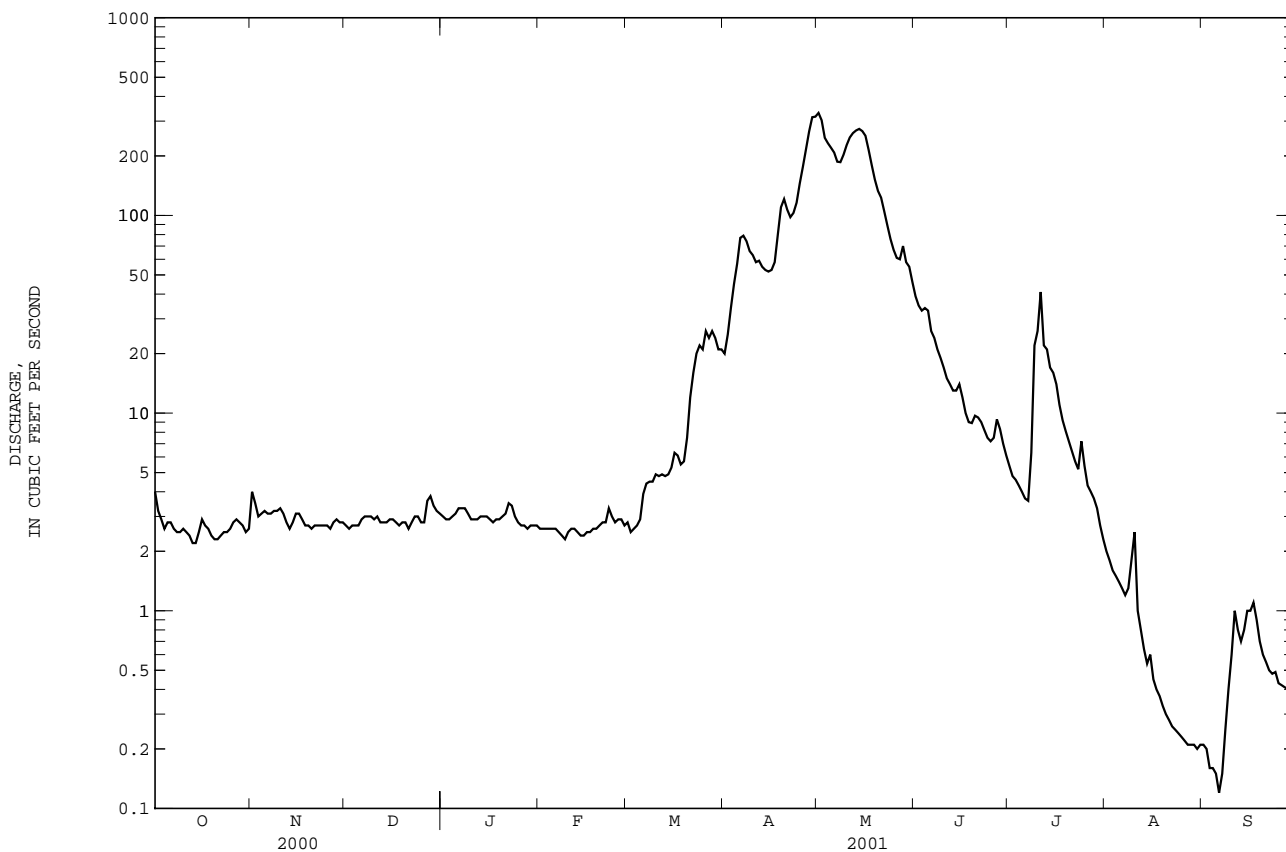
## PLATTE RIVER BASIN

06647500 BOX ELDER CREEK AT BOXELDER, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1946 - 2001
ANNUAL TOTAL	13263.64	10072.73	--
ANNUAL MEAN	36.2	27.6	36.4
HIGHEST ANNUAL MEAN	--	--	85.8 1983
LOWEST ANNUAL MEAN	--	--	6.95 1989
HIGHEST DAILY MEAN	458 May 20	330 May 1	2460 May 14 1965
LOWEST DAILY MEAN	.05 Many days	.12 Sep 6	.00 Several days, some years
ANNUAL SEVEN-DAY MINIMUM	.05 Aug 12	.16 Sep 1	.00 Some years
MAXIMUM PEAK FLOW	--	363 May 1	4530 May 14 1965
MAXIMUM PEAK STAGE	--	3.92 May 1	8.58 <sup>a</sup> May 14 1965
ANNUAL RUNOFF (AC-FT)	26310	19980	26400
10 PERCENT EXCEEDS	136	79	110
50 PERCENT EXCEEDS	2.9	3.0	3.0
90 PERCENT EXCEEDS	.11	.58	.40

a Site and datum then in use.

e Estimated.



## 06652000 NORTH PLATTE RIVER AT ORIN, WY

LOCATION.--Lat 42°39'10", long 105°09'32", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.17, T.31 N., R.69 W., Converse County, Hydrologic Unit 10180008, on right bank 0.5 mi downstream from bridge on State Highway 319, 0.1 mi downstream from Shawnee Creek, and 1.5 mi east of Orin. Prior to Mar. 6, 1994, at site 0.3 mi upstream.

DRAINAGE AREA.--15,025 mi<sup>2</sup>, of which 1,203 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--January, April to November 1895, April to October 1896, January 1897 to December 1898, April to November 1899, April to September 1917, April to September 1918, May to September 1924, April 1958 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Orin Junction" 1895, 1897-99 and as "at McKinley" 1917-18.

REVISED RECORDS.--WSP 1310: 1896, 1899. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder, and concrete weir since Mar. 6, 1994. Elevation of gage is 4,660 ft above sea level, from topographic map. Jan. 1, 1895, to Nov. 30, 1899, and May 1 to Sept. 30, 1924, nonrecording gage at railroad bridge just upstream from State Highway 319 at different datum. Apr. 1, 1917, to Sept. 30, 1918, nonrecording gage at site 1.9 mi downstream at different datum. Apr. 1958 to Mar. 5, 1994, at site 0.3 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Major regulation began after completion of Pathfinder Reservoir in April 1909. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas. U.S. Geological Survey data collection platform with satellite telemetry at station.

COOPERATION.--Twelve discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	958	1030	824	e780	702	730	1120	2680	1160	2400	2440	2610
2	804	939	767	e780	694	781	1120	2630	1090	2360	2450	2650
3	735	825	705	e780	699	827	1170	2560	1060	2360	2460	2640
4	701	771	788	e760	737	872	1240	2410	1180	2320	2470	2630
5	717	768	805	e740	744	964	1360	2450	1150	2500	2480	2620
6	709	756	768	e740	782	1300	1490	2470	1300	2470	2490	2640
7	706	754	721	e760	764	1270	1720	2410	1560	2460	2500	2660
8	698	773	818	771	665	1230	1800	2240	1800	2480	2550	2720
9	700	752	795	757	e600	1130	1740	2090	2080	2380	2580	2760
10	698	759	787	743	e620	1030	1630	2040	2340	2440	2580	2710
11	696	724	655	796	644	910	1610	1900	2280	2600	2670	2690
12	684	656	513	782	756	887	1560	1740	2240	2660	2620	2620
13	680	524	e600	781	831	872	1540	1660	2260	2580	2560	2350
14	684	536	e700	801	770	1320	1510	1600	2330	2610	2580	2360
15	682	574	e820	749	e640	1590	1470	1520	2420	2530	2540	2410
16	685	646	e800	744	e700	1580	1480	1440	2420	2660	2580	2370
17	793	e690	e740	714	e720	1560	1480	1400	2420	2650	2630	1890
18	1550	e750	e820	668	725	1480	1470	1310	2440	2700	2650	1590
19	1570	e810	e760	658	761	1100	1540	1200	2430	2680	2610	1320
20	1440	e750	e800	720	773	1080	1690	1130	2470	2630	2580	1200
21	825	e810	e760	723	761	1090	1830	1080	2620	2560	2590	1160
22	763	e850	e740	715	775	1140	1910	1110	2650	2610	2580	1140
23	745	827	e820	724	857	1190	1880	1090	2550	2580	2620	1110
24	755	815	e760	757	895	1200	1940	1060	2500	2500	2560	1090
25	748	793	e760	732	829	1190	2100	1130	2490	2480	2560	1090
26	737	816	e760	728	794	1180	2280	1090	2440	2490	2590	1080
27	730	798	e740	764	790	1180	2510	1120	2470	2490	2560	1050
28	739	819	e820	723	771	1180	2530	1150	2440	2490	2560	1030
29	746	816	e820	755	---	1130	2780	1170	2410	2500	2560	1010
30	737	714	e800	737	---	1140	2830	1260	2400	2480	2550	911
31	754	---	e760	709	---	1140	---	1240	---	2470	2560	---
TOTAL	25169	22845	23526	23091	20799	35273	52330	51380	63400	78120	79310	58111
MEAN	812	762	759	745	743	1138	1744	1657	2113	2520	2558	1937
MAX	1570	1030	824	801	895	1590	2830	2680	2650	2700	2670	2760
MIN	680	524	513	658	600	730	1120	1060	1060	2320	2440	911
AC-FT	49920	45310	46660	45800	41250	69960	103800	101900	125800	155000	157300	115300

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1895 - 2001, BY WATER YEAR (WY)

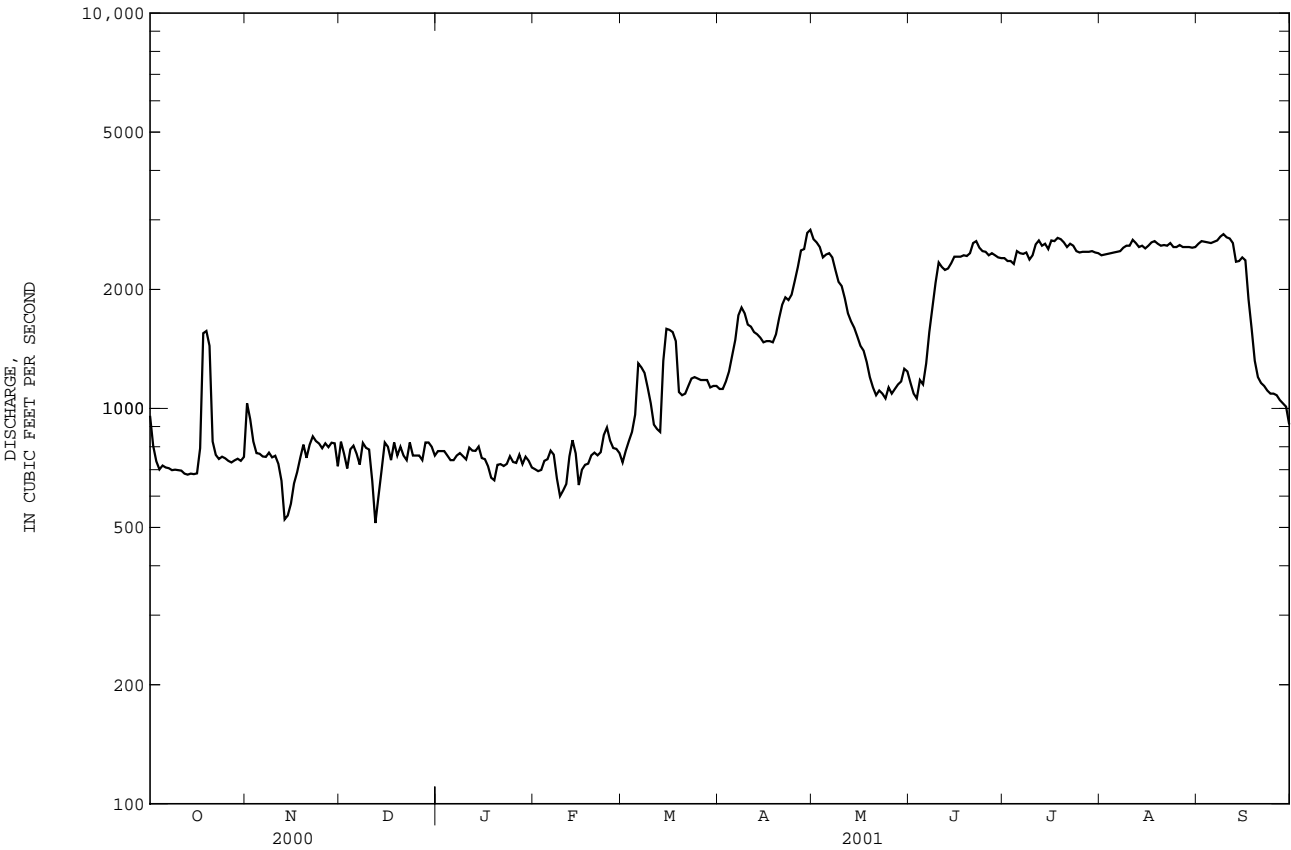
	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
MEAN	1177	1064	890	902	988	1225	1923	3312	3233	2647	2299	1628
MAX	1708	2191	1223	1171	1472	2911	4578	9274	14430	9970	5258	4150
(WY)	1986	1987	1974	1986	1980	1984	1974	1973	1917	1917	1924	1917
MIN	571	639	544	600	594	618	670	839	958	982	583	399
(WY)	1961	1959	1991	1992	1993	1981	1981	1992	1990	1967	1898	1898

PLATTE RIVER BASIN

06652000 NORTH PLATTE RIVER AT ORIN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1895 - 2001	
ANNUAL TOTAL	587542		533354		--	
ANNUAL MEAN	1605		1461		1646	
HIGHEST ANNUAL MEAN	--		--		3110	
LOWEST ANNUAL MEAN	--		--		935	
HIGHEST DAILY MEAN	5550	May 18	2830	Apr 30	20300	Jun 27 1917
LOWEST DAILY MEAN	513	Dec 12	513	Dec 12	140	Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	621	Nov 11	621	Nov 11	324	Sep 25 1966
MAXIMUM PEAK FLOW	--		3430 <sup>a</sup>	Apr 29	23800 <sup>b</sup>	May 15 1965
MAXIMUM PEAK STAGE	--		6.73 <sup>c</sup>	Nov 18	10.45 <sup>d</sup>	Jun 12 1970
ANNUAL RUNOFF (AC-FT)	1165000		1058000		1192000	
10 PERCENT EXCEEDS	2960		2580		3760	
50 PERCENT EXCEEDS	1250		1140		1290	
90 PERCENT EXCEEDS	740		714		700	

- a Gage height, 5.26 ft.  
b Gage height, 10.00 ft, site and datum then in use.  
c Backwater from ice.  
d Site and datum then in use.  
e Estimated.



06652700 GLENDO RESERVOIR NEAR GLENDO, WY

LOCATION.--Lat 42°28'21", long 104°57'28", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.24, T.29 N., R.68 W., Platte County, Hydrologic Unit 10180008, on right bank in gate shaft house on North Platte River, 0.5 mi southwest of Glendo Dam, and 5.0 mi southeast of Glendo.

DRAINAGE AREA.--15,545 mi<sup>2</sup>, of which 1,215 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder for elevations above 4,543.50 ft. Datum of gage is 4,543.50 ft above sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by rock-fill dam completed in October 1957. Storage began Oct. 17, 1957. Capacity, 789,400 acre-ft at elevation 4,653.00 ft, spillway crest. Dead storage, 11,030 acre-ft. Figures given herein represent total contents. Water is used for irrigation in North Platte River basin, and for power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 758,800 acre-ft, May 28, 1973, elevation, 4,650.94 ft; minimum daily contents(since appreciable storage was attained), 15,140 acre-ft, Sept. 28, 1966, elevation, 4,548.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 508,000 acre-ft, May 13, 14, maximum daily elevation, 508,290 ft; minimum daily contents, 81,100 acre-ft, Sept. 14, minimum daily elevation, 81,103 ft, Sept. 14.

Capacity table (elevation in feet,  
and contents, in acre-feet)

4,570	63,100	4,610	274,000
4,580	98,800	4,620	358,000
4,590	144,000	4,630	459,000
4,600	202,000	4,640	583,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

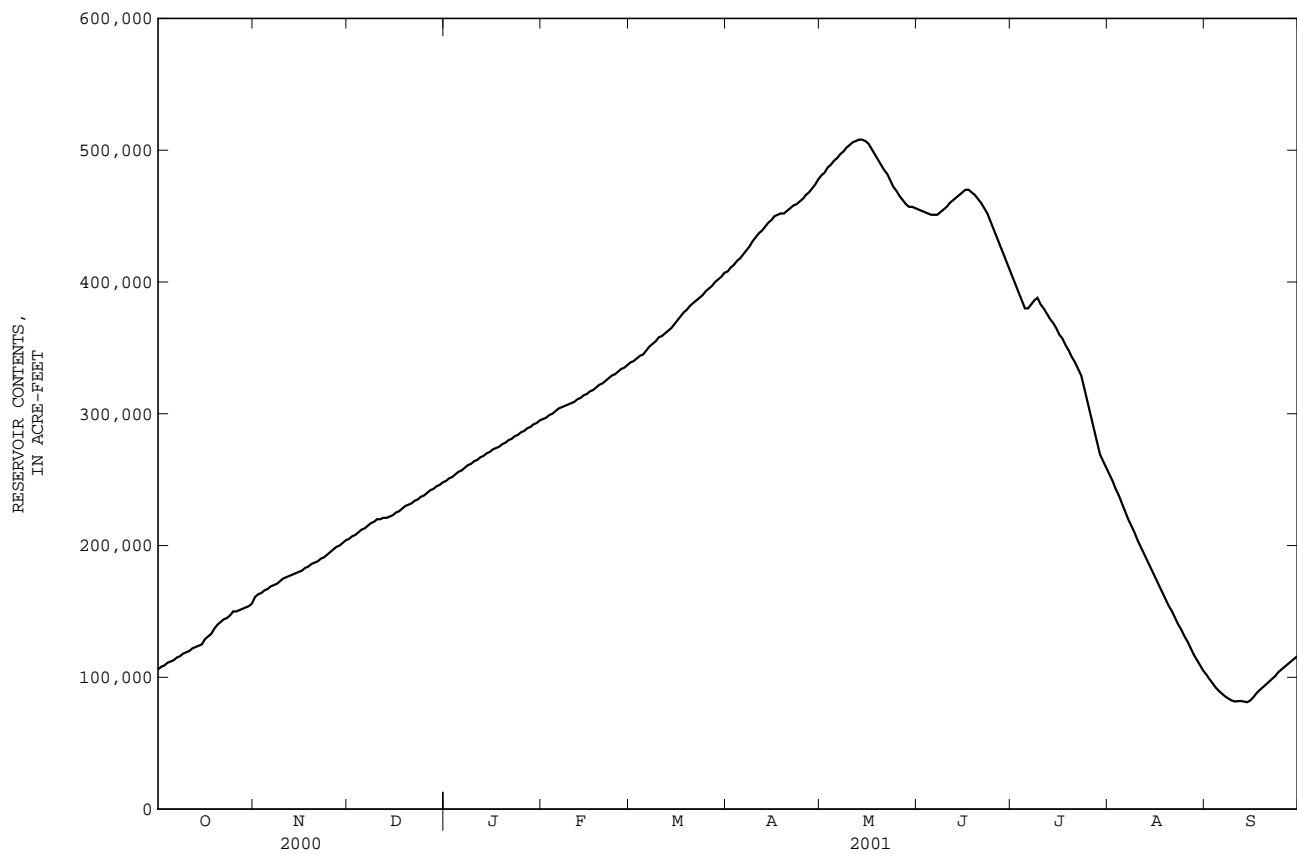
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106000	161000	205000	249000	296000	339000	408000	481000	455000	404000	254000	102000
2	108000	163000	207000	251000	297000	340000	411000	483000	454000	398000	249000	98500
3	109000	164000	208000	252000	299000	342000	413000	487000	453000	392000	243000	95400
4	111000	166000	210000	254000	300000	344000	416000	489000	452000	386000	238000	92100
5	112000	167000	212000	256000	302000	345000	418000	492000	451000	380000	232000	89600
6	113000	169000	213000	257000	304000	348000	421000	494000	451000	380000	226000	87500
7	115000	170000	215000	259000	305000	351000	424000	497000	451000	383000	220000	85500
8	116000	171000	217000	261000	306000	353000	427000	499000	453000	386000	215000	83900
9	118000	173000	218000	262000	307000	355000	431000	502000	455000	388000	210000	82500
10	119000	175000	220000	264000	308000	358000	434000	504000	457000	383000	204000	81700
11	120000	176000	220000	265000	309000	359000	437000	506000	460000	380000	199000	81900
12	122000	177000	221000	267000	311000	361000	439000	507000	462000	376000	194000	82000
13	123000	178000	221000	268000	312000	363000	442000	508000	464000	372000	189000	81600
14	124000	179000	222000	270000	314000	365000	445000	508000	466000	369000	184000	81100
15	125000	180000	223000	271000	315000	368000	447000	507000	468000	365000	179000	82400
16	129000	181000	225000	273000	317000	371000	450000	505000	470000	360000	174000	84900
17	131000	183000	226000	274000	318000	374000	451000	501000	470000	357000	169000	87900
18	133000	184000	228000	275000	320000	377000	452000	497000	468000	352000	164000	90300
19	137000	186000	230000	277000	322000	379000	452000	493000	466000	348000	159000	92400
20	140000	187000	231000	278000	323000	382000	454000	489000	463000	343000	154000	94500
21	142000	188000	232000	280000	325000	384000	456000	485000	460000	339000	150000	96700
22	144000	190000	234000	281000	327000	386000	458000	482000	456000	334000	145000	98900
23	145000	191000	235000	283000	329000	388000	459000	477000	452000	329000	140000	101000
24	147000	193000	237000	284000	330000	390000	461000	472000	446000	319000	136000	104000
25	150000	195000	238000	286000	332000	393000	463000	469000	440000	309000	131000	106000
26	150000	197000	240000	287000	334000	395000	466000	465000	434000	299000	127000	108000
27	151000	199000	242000	289000	335000	397000	468000	462000	428000	289000	122000	110000
28	152000	200000	243000	290000	337000	400000	471000	459000	422000	279000	117000	112000
29	153000	202000	245000	292000	---	402000	474000	457000	416000	269000	113000	114000
30	154000	204000	246000	293000	---	404000	478000	457000	410000	264000	109000	116000
31	156000	---	248000	295000	---	407000	---	456000	---	259000	105000	---
MAX	156000	204000	248000	295000	337000	407000	478000	508000	470000	404000	254000	116000
MIN	106000	161000	205000	249000	296000	339000	408000	456000	410000	259000	105000	81100
(#)	4,592.19	4,600.19	4,604.57	4,612.61	4,617.62	4,625.04	4,631.65	4,629.69	4,623.39	4,608.11	4,581.57	4,584.14
(*)	+52,000	+48,000	+44,000	+47,000	+42,000	+70,000	+71,000	-22,000	-46,000	-151,000	-154,000	+11,000

WTR YR 2001 MAX 508,000 MIN 81,100 (\*) +60,000

(#) Elevation, in feet, at end of month.

(\*) Change in elevation, in acre-feet.

06652700 GLEND0 RESERVOIR NEAR GLEND0, WY--Continued



## 06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY

LOCATION.--Lat 42°27'25", long 104°56'50", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.30, T.29 N., R.67 W., Platte County, Hydrologic Unit 10180008, on right bank opposite Sand Draw, 1.3 mi upstream from Horseshoe Creek, 3.1 mi downstream from Glendo Dam, and 5.2 mi southeast of Glendo.

DRAINAGE AREA.--15,548 mi<sup>2</sup>, of which 1,215 mi<sup>2</sup> probably is non-contributing.

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,488.94 ft above sea level (levels by Bureau of Reclamation).

REMARKS.--Records good except those less than 500 ft<sup>3</sup>/s, which are fair and those for estimated daily discharges, which are poor. Flow completely regulated by Glendo Reservoir since Oct. 17, 1957 (station 06652700). Natural flow of stream affected by transbasin diversions, storage reservoirs, power generation, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Seventeen discharge measurements provided by the Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	39	e24	e27	e23	28	43	980	1490	5430	4990	4250
2	26	29	e24	e27	23	28	41	973	1510	5460	5100	4130
3	25	27	24	e27	23	29	42	978	1520	5510	5250	4100
4	26	27	e24	e27	23	29	42	978	1480	5510	5360	3990
5	28	27	e25	e27	e23	30	42	985	1440	5500	5360	3800
6	27	27	e25	27	e23	30	43	991	1390	2850	5430	3650
7	27	e27	24	e27	e23	30	43	987	1120	971	5380	3570
8	27	e26	24	e27	e24	30	40	985	802	964	5270	3430
9	27	25	24	e27	e26	30	38	837	784	1290	5210	3360
10	28	26	e24	e27	e27	29	38	673	805	4970	5180	2930
11	28	26	e25	26	28	29	40	725	849	4470	5170	2540
12	28	e25	e24	25	29	29	38	905	965	4490	5170	2540
13	28	26	e25	e25	26	28	38	899	1120	4590	5080	2540
14	28	26	e25	e25	e26	28	37	1210	1160	4650	5050	2560
15	28	26	e25	e25	e27	28	37	2090	1290	4590	5090	1840
16	28	26	e25	e25	e27	29	279	2510	1520	4590	5040	1280
17	29	e26	e24	e26	27	29	858	2910	2180	4640	5010	521
18	29	e25	e25	26	27	29	983	3180	3270	4760	4970	494
19	28	26	e25	e26	27	28	973	3070	3600	4910	4930	399
20	28	25	e25	e25	26	29	992	3110	3790	5060	4900	256
21	28	26	e24	e25	e26	30	994	3130	4040	5110	4830	166
22	29	25	e25	e25	e26	29	996	3080	4530	5080	4870	24
23	30	25	e25	25	e27	28	993	3140	4920	5200	4840	23
24	29	25	e25	25	e27	29	996	3090	5330	7310	4730	23
25	29	25	e25	25	e27	29	979	2840	5440	7620	4690	23
26	29	25	e26	24	e27	30	990	2880	5520	7470	4700	24
27	29	25	e26	e24	e28	28	984	2940	5470	7490	4690	24
28	29	24	e26	24	e28	27	991	2500	5380	7460	4650	24
29	29	24	e26	24	---	39	978	1920	5400	7460	4560	25
30	32	24	e26	e24	---	44	988	1570	5430	5110	4400	28
31	36	---	e26	e23	---	43	---	1520	---	4900	4320	---
TOTAL	878	785	770	792	724	935	14576	58586	83545	155415	154220	52564
MEAN	28.3	26.2	24.8	25.5	25.9	30.2	486	1890	2785	5013	4975	1752
MAX	36	39	26	27	29	44	996	3180	5520	7620	5430	4250
MIN	25	24	24	23	23	27	37	673	784	964	4320	23
AC-FT	1740	1560	1530	1570	1440	1850	28910	116200	165700	308300	305900	104300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2001, BY WATER YEAR (WY)

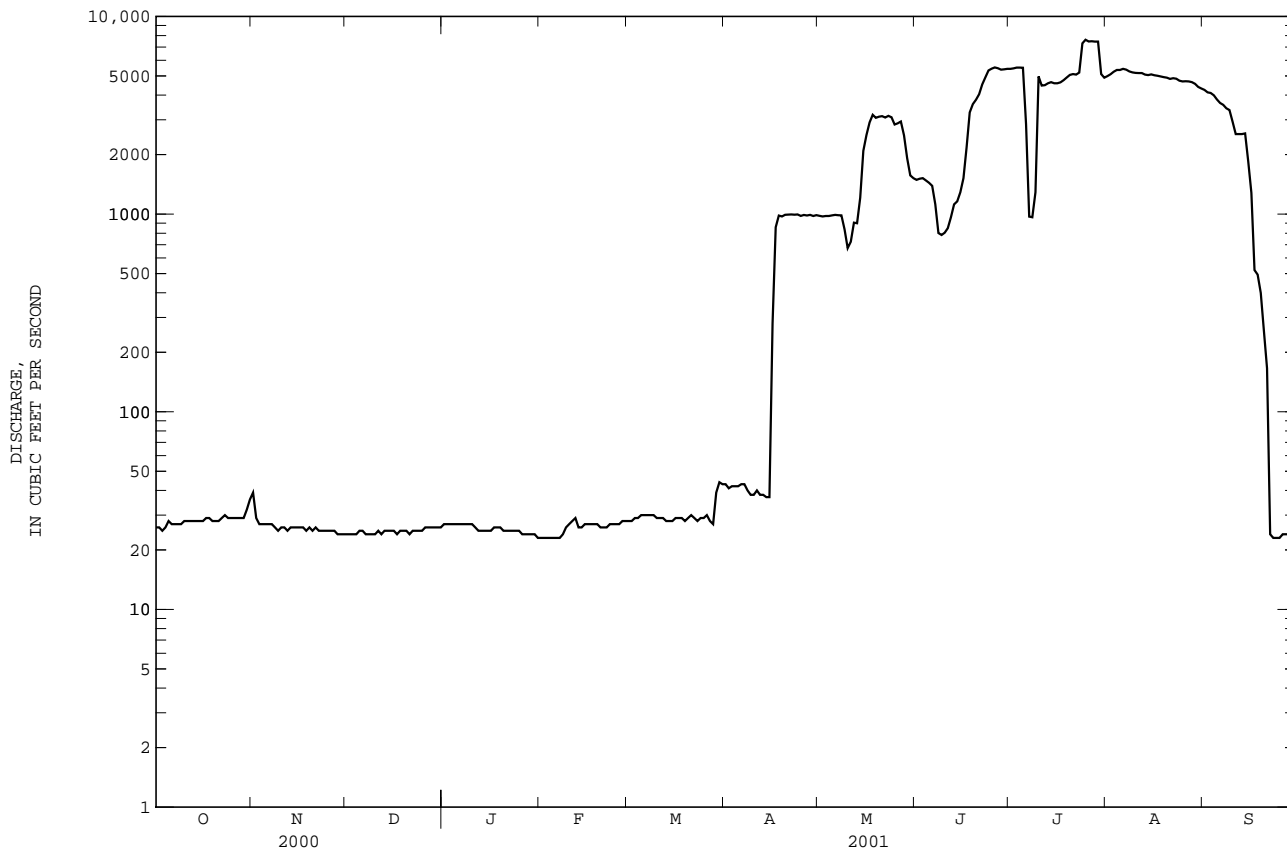
	MEAN	67.3	30.2	16.9	15.0	102	492	1195	2243	2817	4925	4939	2493
MAX	951	857	324	173	1054	3837	3868	4688	8916	8681	8923	6027	
(WY)	1987	1987	1959	1963	1984	1974	1974	1984	1973	1983	1983	1983	
MIN	1.51	1.09	1.00	1.30	1.33	1.58	203	15.4	66.1	3104	3871	906	
(WY)	1992	1991	1991	1992	1990	1990	1960	1990	1962	1962	1977	1961	

## PLATTE RIVER BASIN

06652800 NORTH PLATTE RIVER BELOW GLENDO RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR			FOR 2001 WATER YEAR			WATER YEARS 1958 - 2001		
ANNUAL TOTAL	609467			523790			--		
ANNUAL MEAN	1665			1435			1622		
HIGHEST ANNUAL MEAN	--			--			3126		
LOWEST ANNUAL MEAN	--			--			920		
HIGHEST DAILY MEAN	8000	Jul 25		7620	Jul 25		10300	Jun 30	1984
LOWEST DAILY MEAN	24	Sep 30		23	Several days		.41	Oct 17	1977
ANNUAL SEVEN-DAY MINIMUM	24	Nov 28		23	Jan 31		.64	Dec 20	1990
MAXIMUM PEAK FLOW	--			7710	Jul 24		10300	Jun 29	1984
MAXIMUM PEAK STAGE	--			10.04	Jul 24		11.16	Jun 29	1984
ANNUAL RUNOFF (AC-FT)	1209000			1039000			1175000		
10 PERCENT EXCEEDS	5170			5050			4950		
50 PERCENT EXCEEDS	46			30			218		
90 PERCENT EXCEEDS	25			25			2.2		

e Estimated.





## 06655500 GUERNSEY RESERVOIR NEAR GUERNSEY, WY

LOCATION.--Lat 42°17'23", long 104°45'48", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.27, T.27 N., R.66 W., Platte County, Hydrologic Unit 10180008, on gate structure at right end of dam on North Platte River and 1.2 mi northwest of Guernsey.

DRAINAGE AREA.--16,224 mi<sup>2</sup>, of which 1,216 mi<sup>2</sup> probably is non-contributing.

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1950 monthend figures only, published in WSP 1310.

REVISED RECORDS.--WDR WY-76-1: Drainage area. WDR WY-82-1: 1981 (capacity).

GAGE.--Water-stage recorder. Datum of gage is 4,370.00 ft above sea level (levels by Bureau of Reclamation). Prior to Sept. 20, 1966, nonrecording gages at same datum.

REMARKS.--Reservoir is formed by rock-fill dam completed in July 1927. Capacity, 45,600 acre-ft, at elevation 4,420 ft, top of spillway gate. Dead storage is negligible. Figures given herein represent total contents. Usable contents published prior to October 1956. Water is used for irrigation in eastern Wyoming and western Nebraska and for power generation.

COOPERATION.--Records provided by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 73,240 acre-ft, Oct. 17, 1929, elevation, 4,420.95 ft, no storage Oct. 11, 1982, Oct. 6, 7, Oct. 10 to Dec. 4, 1983, Oct. 19, Oct. 25, 1984 to Jan. 14, 1985, Dec. 6-7, 1986; minimum daily elevation, 4,361.50 ft, Oct. 5, 6, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 36,000 acre-ft, May 28, maximum daily elevation, 4,415.77 ft, May 29; minimum daily contents, 840 acre-ft, July 23, minimum daily elevation, 4,383.20 ft, July 23.

Capacity table (elevation in feet,  
and contents, in acre-feet)

4,380	375	4,395	5,360	4,410	24,070
4,385	1,200	4,400	9,690	4,415	34,300
4,390	2,170	4,405	16,000	4,420	45,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

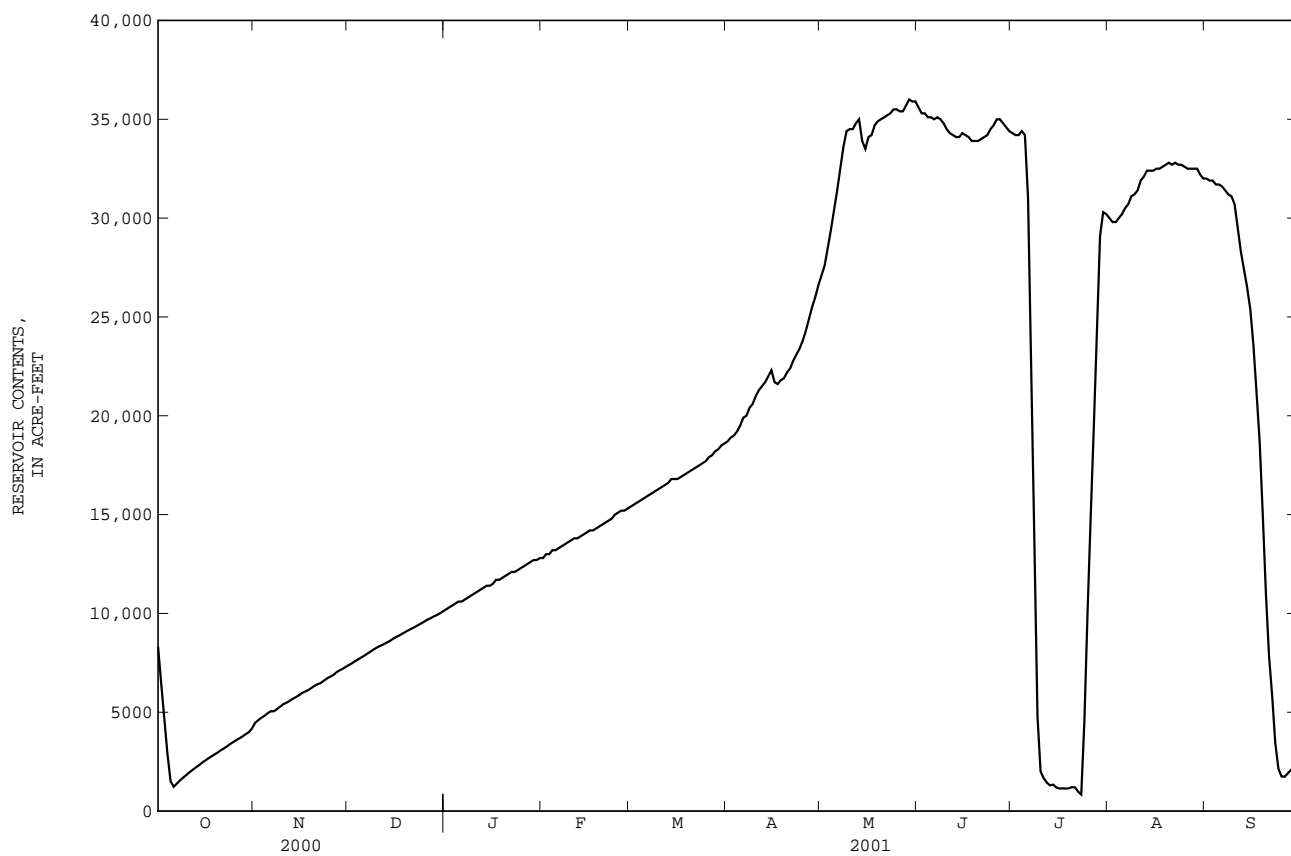
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8320	4460	7390	10200	12800	15400	18700	27100	35600	34300	30000	32000
2	6460	4600	7480	10300	13000	15500	18900	27600	35300	34200	29800	31900
3	4690	4720	7590	10400	13000	15600	19000	28500	35300	34200	29800	31900
4	2900	4820	7680	10500	13200	15700	19200	29400	35100	34400	30000	31700
5	1510	4950	7780	10600	13200	15800	19500	30400	35100	34200	30200	31700
6	1230	5050	7870	10600	13300	15900	19900	31400	35000	31000	30500	31600
7	1390	5050	7980	10700	13400	16000	20000	32500	35100	22400	30700	31400
8	1550	5160	8080	10800	13500	16100	20400	33600	35000	13800	31100	31200
9	1690	5280	8190	10900	13600	16200	20600	34400	34800	4820	31200	31100
10	1820	5410	8280	11000	13700	16300	21000	34500	34500	2000	31400	30700
11	1960	5480	8360	11100	13800	16400	21300	34500	34300	1660	31900	29500
12	2080	5570	8430	11200	13800	16500	21500	34800	34200	1440	32100	28300
13	2200	5680	8520	11300	13900	16600	21700	35000	34100	1300	32400	27400
14	2310	5760	8600	11400	14000	16800	22000	33900	34100	1340	32400	26500
15	2440	5860	8710	11400	14100	16800	22300	33500	34300	1200	32400	25400
16	2550	5970	8800	11500	14200	16800	21700	34100	34200	1140	32500	23600
17	2660	6050	8880	11700	14200	16900	21600	34200	34100	1150	32500	21200
18	2760	6120	8970	11700	14300	17000	21800	34700	33900	1140	32600	18700
19	2860	6230	9060	11800	14400	17100	21900	34900	33900	1150	32700	15000
20	2960	6340	9150	11900	14500	17200	22200	35000	33900	1210	32800	11000
21	3070	6420	9230	12000	14600	17300	22400	35100	34000	1200	32700	7840
22	3170	6480	9310	12100	14700	17400	22800	35200	34100	983	32800	5840
23	3270	6600	9400	12100	14800	17500	23100	35300	34200	840	32700	3440
24	3390	6710	9490	12200	15000	17600	23400	35500	34500	4560	32700	2140
25	3490	6800	9580	12300	15100	17700	23800	35500	34700	10000	32600	1750
26	3590	6880	9680	12400	15200	17900	24300	35400	35000	14800	32500	1740
27	3680	7020	9750	12500	15200	18000	24900	35400	35000	19400	32500	1910
28	3780	7120	9840	12600	15300	18200	25500	35700	34800	24200	32500	2080
29	3890	7200	9910	12700	---	18300	26000	36000	34600	29100	32500	2230
30	3990	7300	10000	12700	---	18500	26600	35900	34400	30300	32200	2380
31	4180	---	10100	12800	---	18600	---	35900	---	30200	32000	---
MAX	8320	7300	10100	12800	15300	18600	26600	36000	35600	34400	32800	32000
MIN	1230	4460	7390	10200	12800	15400	18700	27100	33900	840	29800	1740
(#)	4393.10	4397.52	4400.40	4402.66	4404.54	4406.70	4411.19	4415.74	4415.05	4413.03	4413.90	4389.09
(*)	-6,020	+3,120	+2,800	2,700	2,500	3,300	8,000	-5,970	+9,300	-1,500	-4,200	-29,620

WTR YR 2001 MAX 36,000 MIN 840 (\*) 22,250

(#) Elevation, in feet, at end of month.

(\*) Change in elevation, in acre-feet.

06655500 GUERNSEY RESERVOIR NEAR GUERNSEY, WY--Continued



## 06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY

LOCATION.--Lat 42°14'17", long 104°37'41", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.11, T.26 N., R.65 W., Goshen County, Hydrologic Unit 10180009, on left bank 0.7 mi downstream from Whalen diversion dam, and 6.0 mi northwest of Fort Laramie.

DRAINAGE AREA.--16,237 mi<sup>2</sup>, of which 1,219 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only, prior to January 1915, published in WSP 1910. Prior to Apr. 16, 1938, published as "below Whalen", and Apr. 16, 1938, to Sept. 30, 1974, as "at recorder station, below Whalen".

REVISED RECORDS.--WSP 1310: 1924. WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder and sheet piling weir since Apr. 25, 1994. Elevation of gage is 4,280 ft above sea level, from topographic map. Prior to Apr. 16, 1938, nonrecording gages at Whalen Diversion Dam and canals 0.7 mi upstream at different datums. Apr. 16, 1938, to Nov. 17, 1955, water-stage recorder at site 1.9 mi downstream, and Nov. 18, 1955, to Apr. 25, 1994, at site 1.8 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Whalen Diversion Dam 0.7 mi upstream. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Bureau of Reclamation data collection platform with satellite telemetry at station.

COOPERATION.--Six discharge measurements provided by the Wyoming State Engineer's Office, and nine discharge measurements provided by Bureau of Reclamation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	39	8.8	10	e10	13	9.9	7.8	724	1840	1400	931
2	64	23	8.5	12	e11	12	10	8.2	756	1840	1490	842
3	48	17	8.8	12	e12	12	12	9.5	760	1810	1540	840
4	41	15	8.8	e13	e13	12	12	6.8	732	1820	1580	735
5	40	14	8.6	e14	e13	12	12	6.9	586	1820	1600	626
6	58	13	8.4	e15	e13	12	13	6.4	553	1810	1620	594
7	63	8.5	9.8	e12	e12	11	15	6.8	397	1740	1580	518
8	56	15	9.1	e9.6	e10	11	13	7.0	120	1740	1520	467
9	117	13	9.1	e10	e9.0	11	11	7.3	51	1690	1480	440
10	119	12	7.4	e12	e10	13	7.5	7.7	47	1860	1450	394
11	57	11	e7.0	e14	e11	13	3.7	7.6	46	1610	1370	360
12	48	11	e6.4	e14	e12	14	3.9	7.5	45	1340	1370	341
13	43	11	e6.8	e13	e12	13	3.6	9.1	100	1370	1360	346
14	38	11	e7.4	e12	e11	13	3.4	385	110	1390	1390	373
15	33	10	e8.0	e11	e9.0	12	3.5	825	83	1410	1430	396
16	30	10	8.6	e10	e10	12	25	896	210	1370	1380	408
17	29	9.6	e9.4	e9.8	e11	12	96	921	685	1290	1360	414
18	26	9.6	9.3	e10	e12	12	42	805	1080	1320	1330	410
19	24	9.9	9.0	e11	e13	12	29	813	1100	1380	1270	1070
20	22	9.3	9.6	e12	e12	13	23	865	1070	1380	1270	1090
21	21	9.5	8.6	e12	e12	14	17	853	1090	1500	1270	865
22	21	9.5	9.8	e13	12	12	17	801	1210	1510	1280	134
23	21	9.2	9.9	e14	12	11	10	742	1360	1530	1270	113
24	19	9.1	9.6	e14	13	11	10	668	1550	1580	1220	29
25	18	9.0	9.8	e13	12	12	9.3	618	1700	1560	1160	48
26	17	9.0	10	e14	12	12	12	635	1760	1540	1140	147
27	16	9.0	10	e13	12	11	12	689	1850	1520	1140	138
28	17	9.0	10	e13	13	11	9.2	733	1810	1500	1130	117
29	16	8.5	9.4	e12	---	11	9.3	754	1800	1450	1080	77
30	15	9.0	10	e11	---	11	8.0	810	1830	1410	1010	56
31	15	---	10	e10	---	11	---	708	---	1360	986	---
TOTAL	1231	362.7	275.9	375.4	324.0	372	462.3	13619.6	25215	48290	41476	13319
MEAN	39.7	12.1	8.90	12.1	11.6	12.0	15.4	439	840	1558	1338	444
MAX	119	39	10	15	13	14	96	921	1850	1860	1620	1090
MIN	15	8.5	6.4	9.6	9.0	11	3.4	6.4	45	1290	986	29
AC-FT	2440	719	547	745	643	738	917	27010	50010	95780	82270	26420

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2001, BY WATER YEAR (WY)\*

	185	94.1	60.9	54.2	79.3	268	505	1250	1980	1860	1394	683
MEAN	185	94.1	60.9	54.2	79.3	268	505	1250	1980	1860	1394	683
MAX	1389	1130	405	494	604	3885	5410	6175	14360	8330	5465	3976
(WY)	1918	1987	1930	1927	1930	1974	1924	1924	1917	1917	1983	1983
MIN	4.20	.71	.30	.24	.013	.000	2.83	13.6	126	559	86.6	43.8
(WY)	1967	1967	1967	1962	1967	1976	1954	1990	1982	1934	1934	1934

## PLATTE RIVER BASIN

06657000 NORTH PLATTE RIVER BELOW WHALEN DIVERSION DAM, WY--Continued

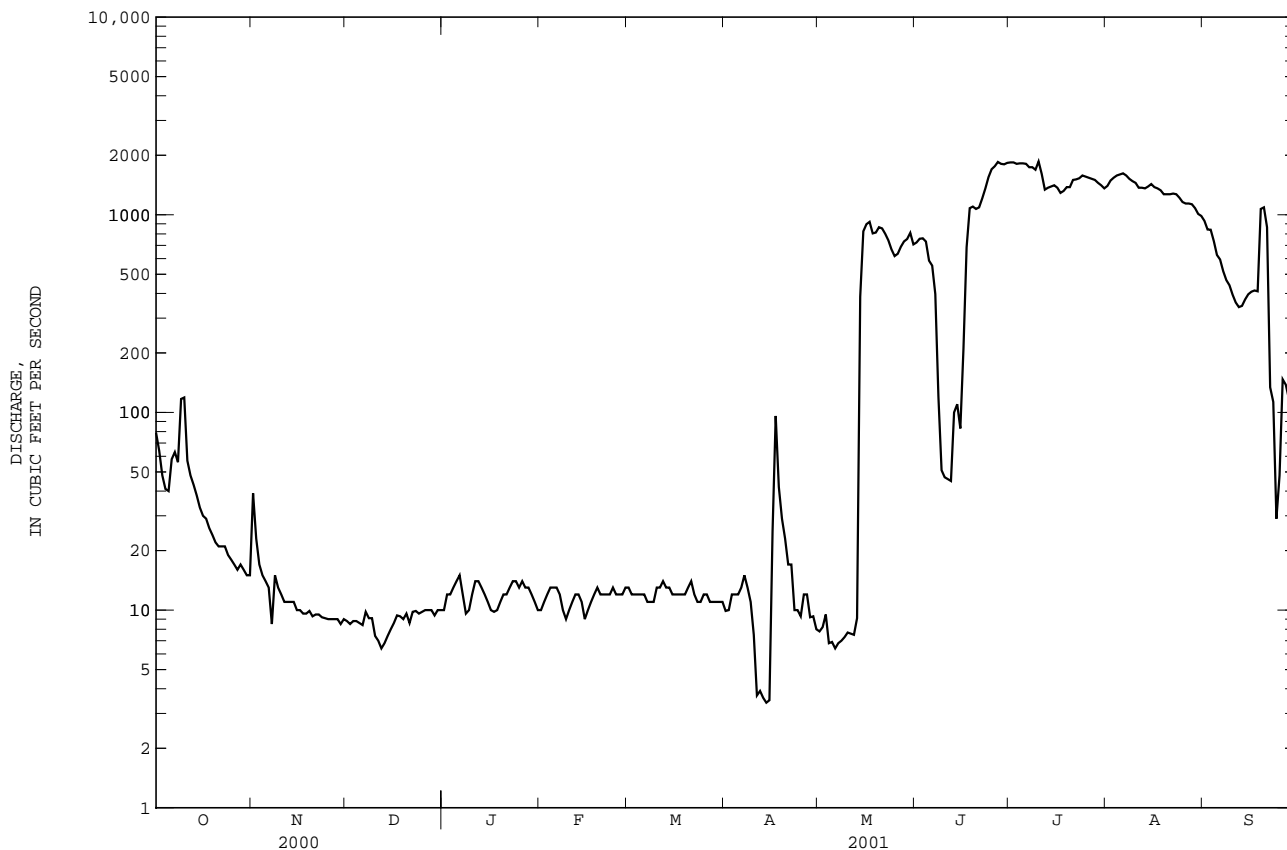
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1917 - 2001*	
ANNUAL TOTAL	172213.9		145322.9		--	
ANNUAL MEAN	471		398		705	
HIGHEST ANNUAL MEAN	--		--		2992	
LOWEST ANNUAL MEAN	--		--		178	
HIGHEST DAILY MEAN	1800	Jun 25	1860	Jul 10	19500	Jun 28 1917
LOWEST DAILY MEAN	5.9	Jan 3	3.4	Apr 14	.00	Many days, several years
ANNUAL SEVEN-DAY MINIMUM	6.3	Jan 1	5.2	Apr 9	.00	Several years
MAXIMUM PEAK FLOW	--		2020	Jul 10	22000 <sup>a</sup>	Jun 26 1955
MAXIMUM PEAK STAGE	--		6.89	Jul 10	9.85 <sup>b</sup>	Jun 26 1955
ANNUAL RUNOFF (AC-FT)	341600		288200		510500	
10 PERCENT EXCEEDS	1510		1440		1880	
50 PERCENT EXCEEDS	40		15		141	
90 PERCENT EXCEEDS	8.6		9.0		4.0	

\* Period of record to 1917 not used in computations, monthly and seasonal records only.

a From rating curve extended above 4,500 ft<sup>3</sup>/s on basis of peak-flow measurement of upstream floods.

b Site and datum then in use.

e Estimated.



## 06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY

LOCATION.--River: Lat 41°08'17", long 105°58'49", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.36, T.14 N., R.77 W., Albany County, Hydrologic Unit 10180010, on left bank 100 ft upstream from diversion dam for Pioneer Canal, 2.2 mi downstream from Fox Creek, 2.5 mi northeast of Woods, and 23 mi southwest of Laramie.

Canal: Lat 41°08'21", long 105°58'45", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.36, T.14 N., R.77 W., Albany County, on left bank 400 ft downstream from headgate.

DRAINAGE AREA.--434 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1912 to September 1924, October 1926 to September 1927, October 1931 to current year (no winter records for river since 1972; no winter records for canal 1972 to 1996). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1918-20, 1922, 1924. WSP 1710: Drainage area. WDR WY-84-1: 1983.

GAGE.--River: Water-stage recorder and concrete control. Datum of gage is 7,388.99 ft above sea level. Apr. 16 to Nov. 15, 1912, nonrecording gage and Nov. 16, 1912, to Sept. 22, 1915, water-stage recorder 90 ft downstream between dam crest and canal headgates at datum 1.00 ft higher. Sept. 23, 1915, to Sept. 30, 1924, Apr. 19 to Sept. 30, 1927, and Apr. 11, 1932, to Sept. 30, 1935, water-stage recorder at site 50 ft downstream at datum 1.00 ft higher. Oct. 1, 1935, to July 13, 1950, water-stage recorder at site 50 ft downstream at present datum.

Canal: Water-stage recorder and Parshall flume. Elevation of gage is 7,390 ft above sea level, from topographic map. Apr. 16, 1912, to Apr. 10, 1923, nonrecording gage; Apr. 11, 1923, to Sept. 30, 1924, and Apr. 19 to June 9, 1927, water-stage recorder; June 10 to Sept. 30, 1927, and Apr. 11, 1932, to May 8, 1938, nonrecording gage; May 9, 1938, to Apr. 26, 1966, water-stage recorder at site 1.5 mi downstream at different datums. Apr. 27, 1966, to May 8, 1967, at present site, at datum 0.06 ft lower.

REMARKS.--Records good. Pioneer Canal diverts from left bank of river at diversion dam 100 ft downstream for irrigation in vicinity of Laramie. Records show combined flow of river and canal. Three small reservoirs upstream from station in Wyoming, total capacity, about 600 acre-ft for irrigation, stock water, and domestic use. Diversions for irrigation of about 5,200 acres upstream from station. Transbasin diversions upstream from station to Cache la Poudre River and tributaries. National Weather Service, in cooperation with State of Wyoming, has data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	56	284	362	52	22	33
2	---	---	---	---	---	---	63	341	360	49	28	36
3	---	---	---	---	---	---	69	294	357	50	28	38
4	---	---	---	---	---	---	71	246	342	49	28	40
5	---	---	---	---	---	---	75	227	294	56	27	39
6	---	---	---	---	---	---	83	231	244	60	30	38
7	---	---	---	---	---	---	80	223	246	59	29	38
8	---	---	---	---	---	---	77	216	288	57	33	38
9	---	---	---	---	---	---	68	255	311	77	56	48
10	---	---	---	---	---	---	62	349	321	76	61	56
11	---	---	---	---	---	---	65	479	301	84	54	64
12	---	---	---	---	---	---	53	516	252	66	47	59
13	---	---	---	---	---	---	60	568	229	70	39	52
14	---	---	---	---	---	---	57	611	201	72	37	48
15	---	---	---	---	---	---	56	671	181	75	40	49
16	---	---	---	---	---	---	62	745	155	72	63	52
17	---	---	---	---	---	---	71	761	135	53	66	52
18	---	---	---	---	---	---	87	780	117	44	49	56
19	---	---	---	---	---	---	107	841	101	40	39	65
20	---	---	---	---	---	---	118	862	101	39	34	61
21	---	---	---	---	---	---	105	734	78	30	35	54
22	---	---	---	---	---	---	96	633	79	30	36	46
23	---	---	---	---	---	---	79	575	76	30	43	43
24	---	---	---	---	---	---	91	550	75	31	42	44
25	---	---	---	---	---	---	98	456	70	27	35	44
26	---	---	---	---	---	---	108	406	66	27	30	45
27	---	---	---	---	---	---	134	432	104	27	27	43
28	---	---	---	---	---	---	181	449	82	28	26	40
29	---	---	---	---	---	---	240	411	67	24	25	39
30	---	---	---	---	---	---	266	402	60	21	26	39
31	---	---	---	---	---	---	---	390	---	22	28	---
TOTAL	---	---	---	---	---	---	2838	14938	5655	1497	1163	1399
MEAN	---	---	---	---	---	---	94.6	482	188	48.3	37.5	46.6
MAX	---	---	---	---	---	---	266	862	362	84	66	65
MIN	---	---	---	---	---	---	53	216	60	21	22	33
AC-FT	---	---	---	---	---	---	5630	29630	11220	2970	2310	2770

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2001, BY WATER YEAR (WY)\*

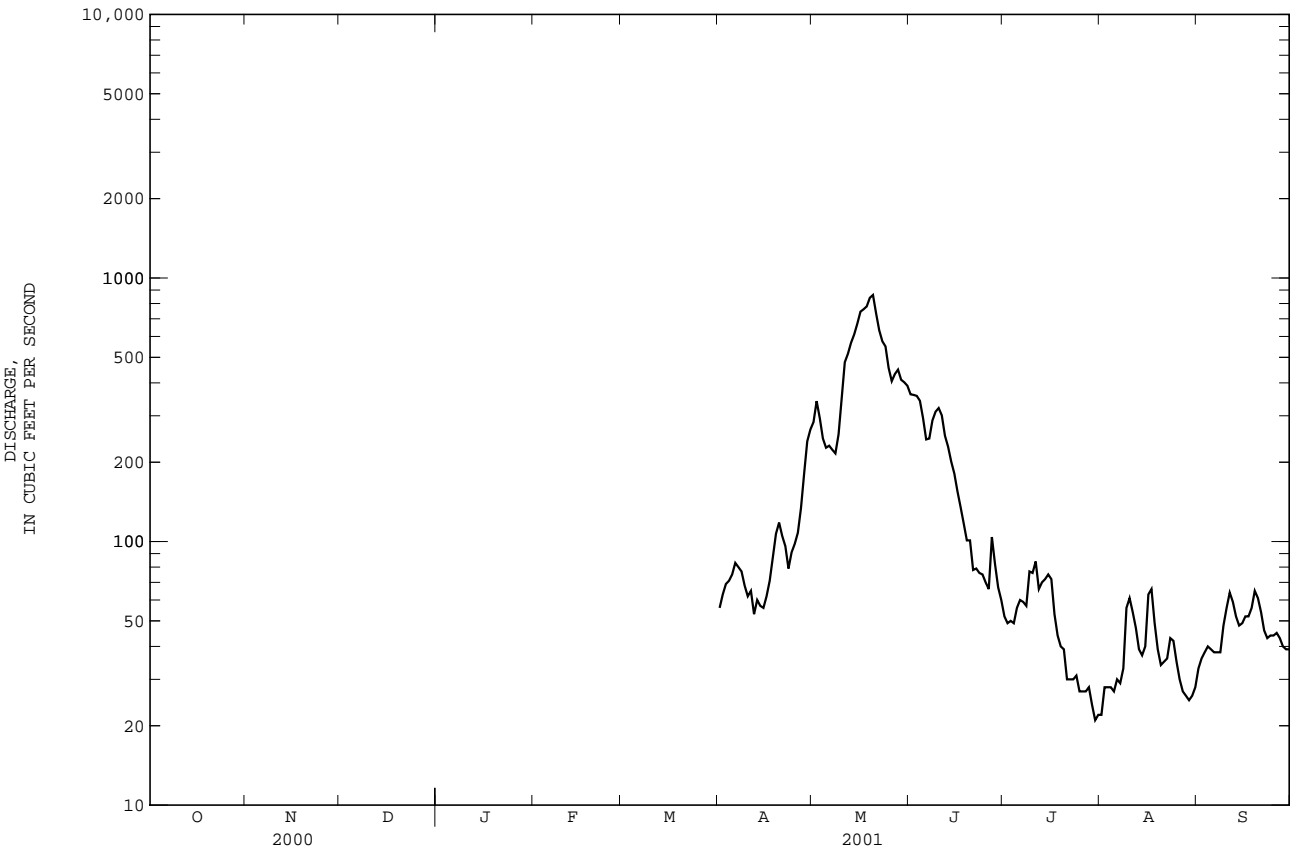
MEAN	63.4	51.9	42.0	38.5	40.1	51.0	127	559	801	202	79.9	58.3
MAX	160	94.9	77.4	57.1	74.5	84.9	355	1131	2441	1019	194	190
(WY)	1962	1962	1966	1966	1962	1966	1962	1984	1983	1983	1983	1997
MIN	33.7	32.0	28.3	24.3	24.6	27.7	51.7	233	62.9	20.2	24.8	15.1
(WY)	1953	1934	1961	1961	1955	1964	1995	1953	1934	1934	1954	1934

PLATTE RIVER BASIN

06659500 LARAMIE RIVER AND PIONEER CANAL NEAR WOODS, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1912 - 2001*	
ANNUAL MEAN	--		170	
HIGHEST ANNUAL MEAN	--		319	1957
LOWEST ANNUAL MEAN	--		64.9	1934
HIGHEST DAILY MEAN	862	May 20	3320	Jun 14 1957
LOWEST DAILY MEAN	21	Jul 30	.00	May 1 1912
MAXIMUM PEAK FLOW	910	May 19	5060	Jun 10 1923
ANNUAL RUNOFF (AC-FT)	--		123100	

\* For period of operation.



## 06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE

LOCATION.--Lat 40°59'37", long 105°45'35", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.24, T.12 N., R.75 W., Larimer County, CO, Hydrologic Unit 10180010, on right bank 1,200 ft south of Colorado-Wyoming State line and 17 mi southwest of Tie Siding, WY.

DRAINAGE AREA.--29.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1968 to current year (no winter records since 1971).

GAGE.--Water-stage recorder. Elevation of gage is 7,580 ft above sea level, from topographic map. Prior to July 19, 1977, gage at site 700 ft upstream at different datum. State of Colorado data collection platform with satellite telemetry at station.

REMARKS.--Records good. Natural flow affected by diversion upstream from station to Cache la Poudre River basin through Wilson Supply ditch. Water imported upstream from station from Deadman Creek in Laramie River basin is rediverted through Wilson Supply ditch, but is wasted down Sand Creek at times. Diversions for irrigation of about 170 acres upstream from station. Result of discharge measurement, in cubic feet per second, made during period when station was not in operation, is given below:

Mar. 26 . . . 2.59

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	2.0	13	18	2.5	.26	.15
2	---	---	---	---	---	---	2.8	14	14	2.3	.18	.13
3	---	---	---	---	---	---	3.2	16	11	2.4	.15	.12
4	---	---	---	---	---	---	3.7	14	11	2.8	.12	.11
5	---	---	---	---	---	---	3.9	15	10	2.6	.12	.11
6	---	---	---	---	---	---	4.3	15	10	2.8	.11	.13
7	---	---	---	---	---	---	4.0	15	9.3	2.5	.16	.16
8	---	---	---	---	---	---	3.5	13	8.3	2.4	.21	.54
9	---	---	---	---	---	---	3.2	13	5.8	3.1	.33	1.1
10	---	---	---	---	---	---	3.1	15	5.1	2.9	1.0	1.9
11	---	---	---	---	---	---	3.9	18	4.9	2.7	2.2	1.6
12	---	---	---	---	---	---	3.3	22	4.6	3.1	2.0	1.4
13	---	---	---	---	---	---	3.0	19	4.3	5.4	1.0	1.1
14	---	---	---	---	---	---	3.1	18	4.5	5.0	.85	.95
15	---	---	---	---	---	---	3.1	17	4.4	3.7	.90	.97
16	---	---	---	---	---	---	3.5	16	4.2	3.0	2.2	1.2
17	---	---	---	---	---	---	4.3	27	3.9	2.2	2.3	1.1
18	---	---	---	---	---	---	6.4	31	3.6	1.7	1.7	1.4
19	---	---	---	---	---	---	7.4	38	3.6	1.3	1.2	1.6
20	---	---	---	---	---	---	7.3	30	3.6	1.0	.82	1.4
21	---	---	---	---	---	---	6.7	28	3.6	.79	.67	1.2
22	---	---	---	---	---	---	6.9	27	3.5	.64	.70	.93
23	---	---	---	---	---	---	5.1	26	3.5	.57	.92	.86
24	---	---	---	---	---	---	5.6	25	3.5	.46	.90	.71
25	---	---	---	---	---	---	7.7	26	3.5	.42	.67	.69
26	---	---	---	---	---	---	7.7	25	3.5	.42	.49	.66
27	---	---	---	---	---	---	8.0	28	3.5	.55	.41	.63
28	---	---	---	---	---	---	9.1	26	3.2	.54	.32	.66
29	---	---	---	---	---	---	11	24	3.0	.46	.34	.71
30	---	---	---	---	---	---	12	21	2.8	.35	.25	.78
31	---	---	---	---	---	---	---	22	---	.30	.19	---
TOTAL	---	---	---	---	---	---	158.8	657	177.7	60.90	23.67	25.00
MEAN	---	---	---	---	---	---	5.29	21.2	5.92	1.96	.76	.83
MAX	---	---	---	---	---	---	12	38	18	5.4	2.3	1.9
MIN	---	---	---	---	---	---	2.0	13	2.8	.30	.11	.11
AC-FT	---	---	---	---	---	---	315	1300	352	121	47	50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2001, BY WATER YEAR (WY)\*

MEAN	3.13	3.34	2.66	2.27	2.46	2.73	8.55	38.8	50.1	9.35	2.33	1.76
MAX	3.68	4.41	2.97	2.53	3.19	2.85	18.7	95.0	234	72.6	8.58	6.85
(WY)	1971	1971	1971	1971	1971	1971	1986	1984	1983	1977	1983	1997
MIN	2.75	2.47	2.39	1.83	1.84	2.65	2.90	17.9	5.92	1.33	.24	.32
(WY)	1970	1969	1970	1970	1969	1969	1995	1977	2001	1989	2000	1978

## PLATTE RIVER BASIN

06659580 SAND CREEK AT COLORADO-WYOMING STATE LINE--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

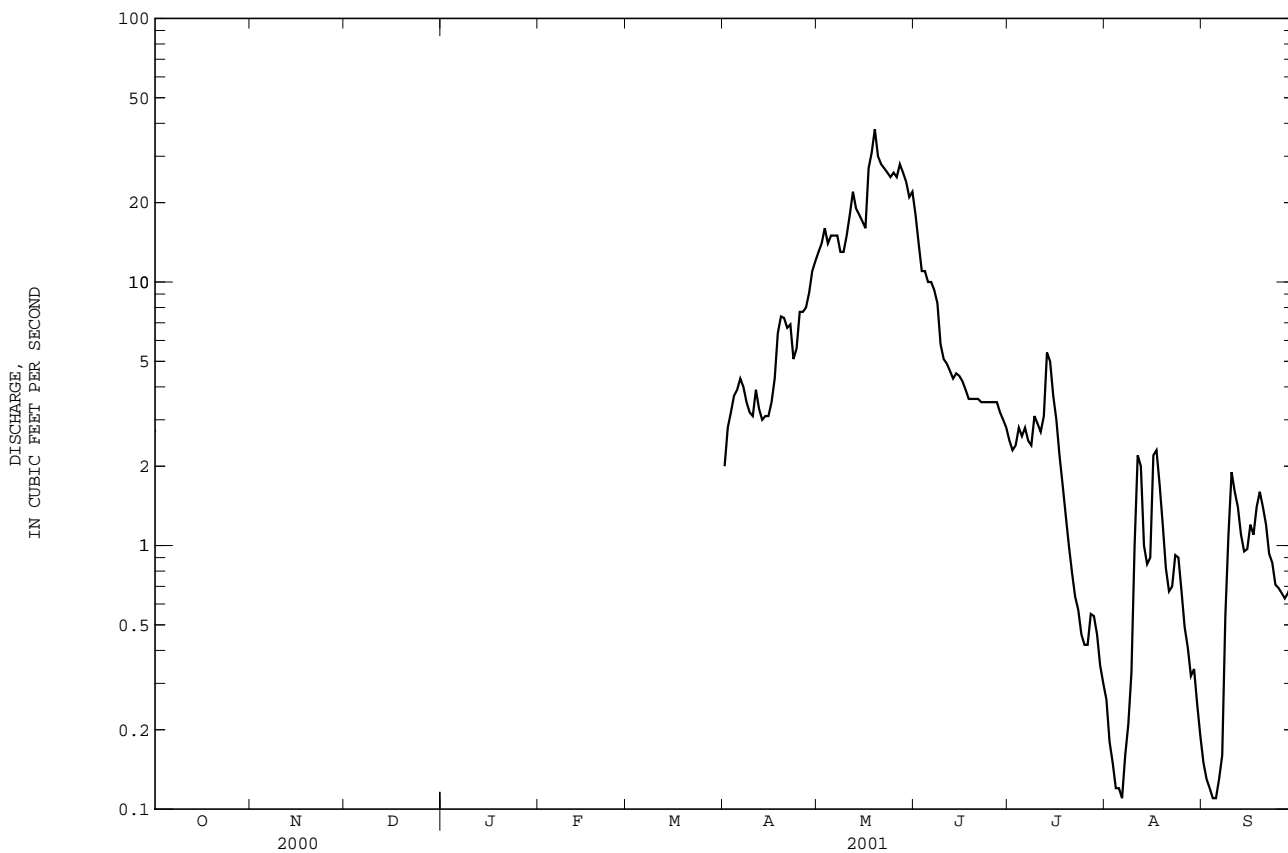
WATER YEARS 1969 - 2001\*

ANNUAL MEAN	--		12.7	
HIGHEST ANNUAL MEAN	--		18.0	1971
LOWEST ANNUAL MEAN	--		6.41	1969
HIGHEST DAILY MEAN	38	May 19	1500	Jul 19 1977
LOWEST DAILY MEAN	.11	Aug 6, Sep 4,5		Aug 13 2000
MAXIMUM PEAK FLOW	43	May 19	6710 <sup>a</sup>	Jul 19 1977
MAXIMUM PEAK STAGE	1.20	May 19	6.65 <sup>b</sup>	Jul 19 1977
INSTANTANEOUS LOW FLOW	--		.13	Jul 26 1972
ANNUAL RUNOFF (AC-FT)	--		9240	

\* For period of operation.

a From slope-area measurement of peak flow.

b From floodmarks.





06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY

LOCATION.--Lat 41°17'42", long 106°02'03", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.4, T.15 N., R.77 W., Albany County, Hydrologic Unit 10180010, on right bank 40 ft downstream from State Highway 130, 1.2 mi west of Filmore, and 4.4 mi downstream from North Fork.

DRAINAGE AREA.--157 mi<sup>2</sup>. Area at site used prior to Sept. 8, 1976, 156 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1902 to September 1903 (published as "near Hatton"), May 1911 to November 1926, October 1932 to current year (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1903, 1914, 1922-26. WSP 1440: 1902. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,610 ft above sea level, from topographic map. Prior to Sept. 16, 1938, nonrecording gages, and Sept. 16, 1938 to Sept. 7, 1976, water-stage recorder, at sites 0.7 mi upstream at different datums.

REMARKS.--Records good. At least ten small reservoirs upstream from station, combined capacity, more than 160 acre-ft, for irrigation, stock water, recreation, and domestic use. Diversions upstream from station for irrigation of about 11,020 acres, of which about 20 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	27	66	421	90	27	19
2	---	---	---	---	---	---	31	95	451	81	26	17
3	---	---	---	---	---	---	37	77	453	75	26	17
4	---	---	---	---	---	---	34	89	370	74	24	16
5	---	---	---	---	---	---	33	101	304	71	24	17
6	---	---	---	---	---	---	32	125	293	71	24	19
7	---	---	---	---	---	---	29	139	332	71	25	21
8	---	---	---	---	---	---	33	124	336	77	25	23
9	---	---	---	---	---	---	35	87	331	71	29	24
10	---	---	---	---	---	---	29	90	327	69	30	22
11	---	---	---	---	---	---	27	120	316	78	29	19
12	---	---	---	---	---	---	27	164	319	69	27	18
13	---	---	---	---	---	---	28	227	278	76	23	17
14	---	---	---	---	---	---	28	264	246	87	26	18
15	---	---	---	---	---	---	27	343	228	125	29	18
16	---	---	---	---	---	---	26	455	194	67	29	19
17	---	---	---	---	---	---	26	583	186	54	29	19
18	---	---	---	---	---	---	29	495	175	49	25	22
19	---	---	---	---	---	---	35	481	179	44	22	21
20	---	---	---	---	---	---	37	501	171	41	22	19
21	---	---	---	---	---	---	35	381	166	40	22	17
22	---	---	---	---	---	---	37	304	152	40	23	17
23	---	---	---	---	---	---	34	305	144	36	29	16
24	---	---	---	---	---	---	51	358	145	37	24	15
25	---	---	---	---	---	---	69	392	185	35	22	15
26	---	---	---	---	---	---	47	430	151	35	20	e14
27	---	---	---	---	---	---	41	482	141	35	19	14
28	---	---	---	---	---	---	43	518	126	32	18	e14
29	---	---	---	---	---	---	52	445	116	29	18	e14
30	---	---	---	---	---	---	61	457	103	27	19	15
31	---	---	---	---	---	---	---	426	---	27	19	---
TOTAL	---	---	---	---	---	---	1080	9124	7339	1813	754	536
MEAN	---	---	---	---	---	---	36.0	294	245	58.5	24.3	17.9
MAX	---	---	---	---	---	---	69	583	453	125	30	24
MIN	---	---	---	---	---	---	26	66	103	27	18	14
AC-FT	---	---	---	---	---	---	2140	18100	14560	3600	1500	1060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2001, BY WATER YEAR (WY)\*

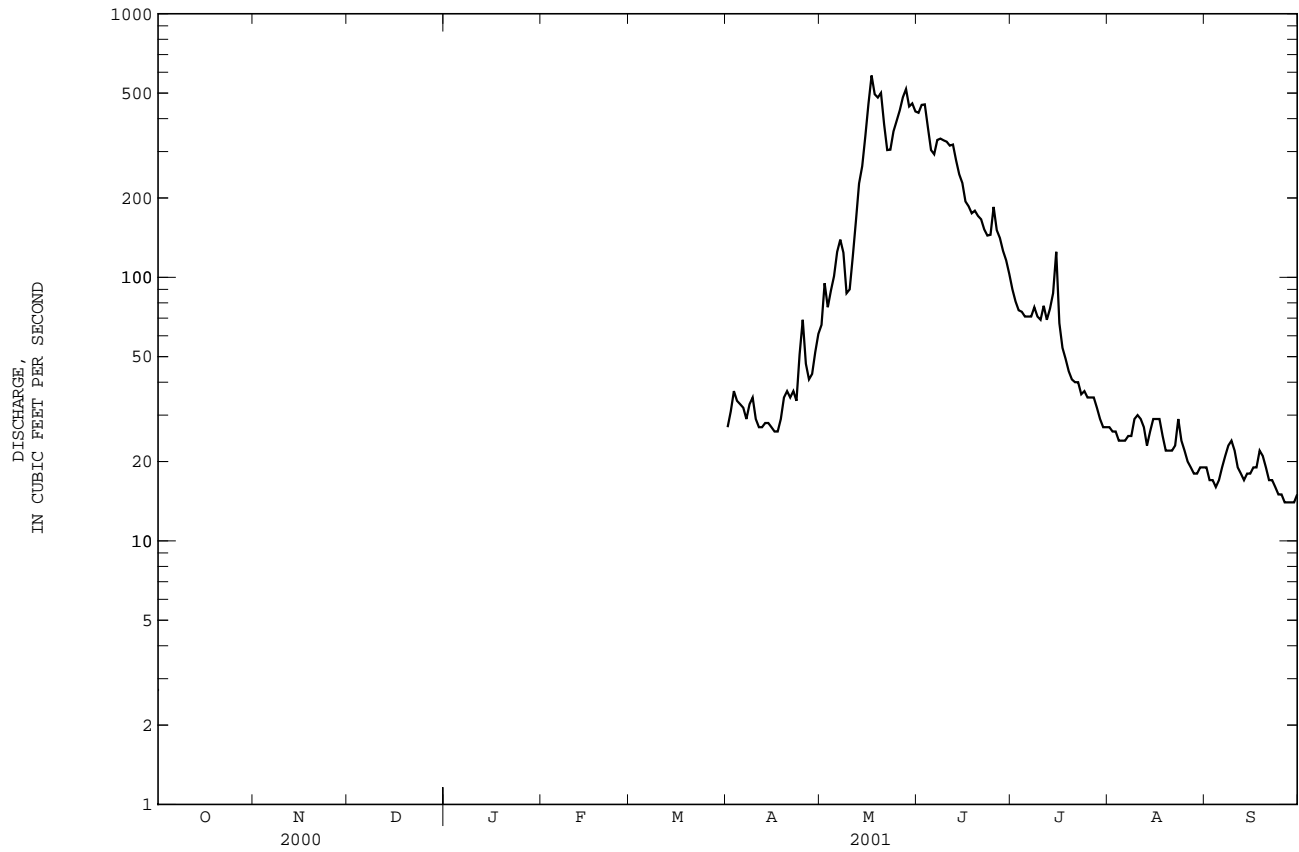
MEAN	31.1	28.2	23.9	19.6	20.5	26.4	53.8	235	530	159	50.8	29.2
MAX	77.2	50.0	40.0	35.0	53.8	47.9	136	502	1217	572	126	74.7
(WY)	1913	1913	1913	1913	1962	1971	1924	1926	1903	1917	1984	1912
MIN	13.2	10.0	10.0	8.76	8.00	9.97	17.6	69.5	48.3	17.9	12.6	8.80
(WY)	1936	1920	1934	1955	1955	1955	1955	1968	1934	1934	1934	1913

PLATTE RIVER BASIN

06661000 LITTLE LARAMIE RIVER NEAR FILMORE, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1903 - 2001*	
ANNUAL MEAN	--		103	
HIGHEST ANNUAL MEAN	--		184	1917
LOWEST ANNUAL MEAN	--		32.7	1934
HIGHEST DAILY MEAN	583	May 17	2400	Jun 1 1914
LOWEST DAILY MEAN	14	Sep 26-29	1.0	Sep 17-20 1913
MAXIMUM PEAK FLOW	646	May 17	3450	Jun 10 1965
MAXIMUM PEAK STAGE	3.32	May 17	5.33	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		74380	

\* For period of operation.  
e Estimated.



06661585 LARAMIE RIVER NEAR BOSLER, WY

LOCATION.--Lat 41°33'17", long 105°40'58", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.10, T.18 N., R.74 W., Albany County, Hydrologic Unit 10180010, on left bank 50 ft upstream from bridge on U.S. Highways 30 and 287, 0.2 mi northwest of Bosler Junction, 1.7 mi south of Bosler, and 2.0 mi downstream from Soil Bank Boughton Canal diversion dam.

DRAINAGE AREA.--1,790 mi<sup>2</sup>, of which 283 mi<sup>2</sup> probably is noncontributing.

PERIOD OF RECORD.--October 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,030 ft above sea level, from topographic map.

REMARKS.--Records good except those for periods of estimated daily discharge, which are poor. Natural flow of stream affected by transbasin diversions, storage reservoirs, diversion upstream from station for irrigation of about 54,700 acres, of which about 2,300 acres are downstream from station, and return flow from irrigated areas. National Weather Service data collection platform with satellite telemetry at station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	72	e34	e27	e31	e22	e155	67	235	28	3.1	.73
2	51	e60	e35	e27	e32	e21	147	66	303	22	2.5	.47
3	47	e46	e37	e29	e31	e25	133	85	293	18	2.2	.31
4	42	e38	e36	e32	e29	e33	127	106	284	14	1.9	.30
5	41	e40	e35	e32	e30	e43	113	151	289	13	1.7	.25
6	42	e35	e32	e30	e29	e54	106	173	256	12	1.4	.65
7	41	e32	e31	e28	e29	e52	105	169	205	14	.87	1.3
8	42	e32	e31	e25	e25	e56	99	154	185	18	.68	2.6
9	41	e37	e32	e23	e15	e64	92	134	178	25	1.4	2.6
10	38	e34	e33	e24	e25	e60	90	109	176	25	1.0	2.1
11	37	e30	e31	e29	e29	e54	95	92	171	29	.66	1.7
12	38	e28	e28	e29	e32	e56	93	81	163	43	.49	1.5
13	37	e30	e28	e27	e31	e74	95	74	168	46	.56	1.6
14	35	e27	e31	e25	e27	e110	93	110	194	40	2.4	2.5
15	35	e26	e29	e24	e29	e94	90	129	182	37	2.3	4.9
16	36	e26	e31	e24	e31	e86	87	144	149	38	2.3	5.6
17	36	e26	e32	e25	e33	e88	83	176	119	38	3.4	5.9
18	37	e25	e29	e26	e30	e96	84	239	102	28	3.6	6.6
19	38	e26	e29	e27	e28	e102	81	326	89	22	4.3	6.0
20	39	e24	e29	e29	e29	e116	76	370	72	16	4.7	4.9
21	42	e25	e27	e29	e31	e110	71	402	67	13	4.6	5.1
22	43	e25	e28	e29	e29	e130	80	458	63	11	3.7	4.4
23	44	e26	e29	e27	e27	e170	78	442	55	9.3	2.8	4.3
24	39	e24	e28	e25	e28	e255	97	345	50	8.7	2.1	4.4
25	44	e27	e26	e25	e26	e240	119	269	50	7.8	1.7	3.7
26	62	e29	e23	e25	e25	e225	138	202	49	6.9	1.2	3.7
27	56	e38	e24	e23	e23	e210	122	157	50	6.6	.94	4.3
28	56	e36	e26	e26	e24	e195	98	170	47	6.5	.93	4.5
29	54	e35	e25	e27	---	e185	82	170	41	5.9	.73	4.6
30	52	e33	e25	e32	---	e175	72	186	35	4.7	.67	4.6
31	55	---	e26	e30	---	e165	---	196	---	4.0	.77	---
TOTAL	1353	992	920	840	788	3366	3001	5952	4320	610.4	61.60	96.11
MEAN	43.6	33.1	29.7	27.1	28.1	109	100	192	144	19.7	1.99	3.20
MAX	62	72	37	32	33	255	155	458	303	46	4.7	6.6
MIN	35	24	23	23	15	21	71	66	35	4.0	.49	.25
AC-FT	2680	1970	1820	1670	1560	6680	5950	11810	8570	1210	122	191

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2001, BY WATER YEAR (WY)

	MEAN	58.1	75.2	56.7	47.4	57.1	109	154	283	709	250	79.4	31.0
MAX	196	155	101	92.7	120	209	531	1198	2512	1529	428	140	
(WY)	1985	1987	1984	1986	1986	1986	1984	1984	1983	1983	1984	1984	
MIN	3.26	7.37	8.09	18.8	28.1	44.0	10.3	17.0	86.4	9.45	1.99	.96	
(WY)	1993	1995	1995	1991	2001	1995	1995	1990	1994	1994	2001	1994	

## PLATTE RIVER BASIN

06661585 LARAMIE RIVER NEAR BOSLER, WY--Continued

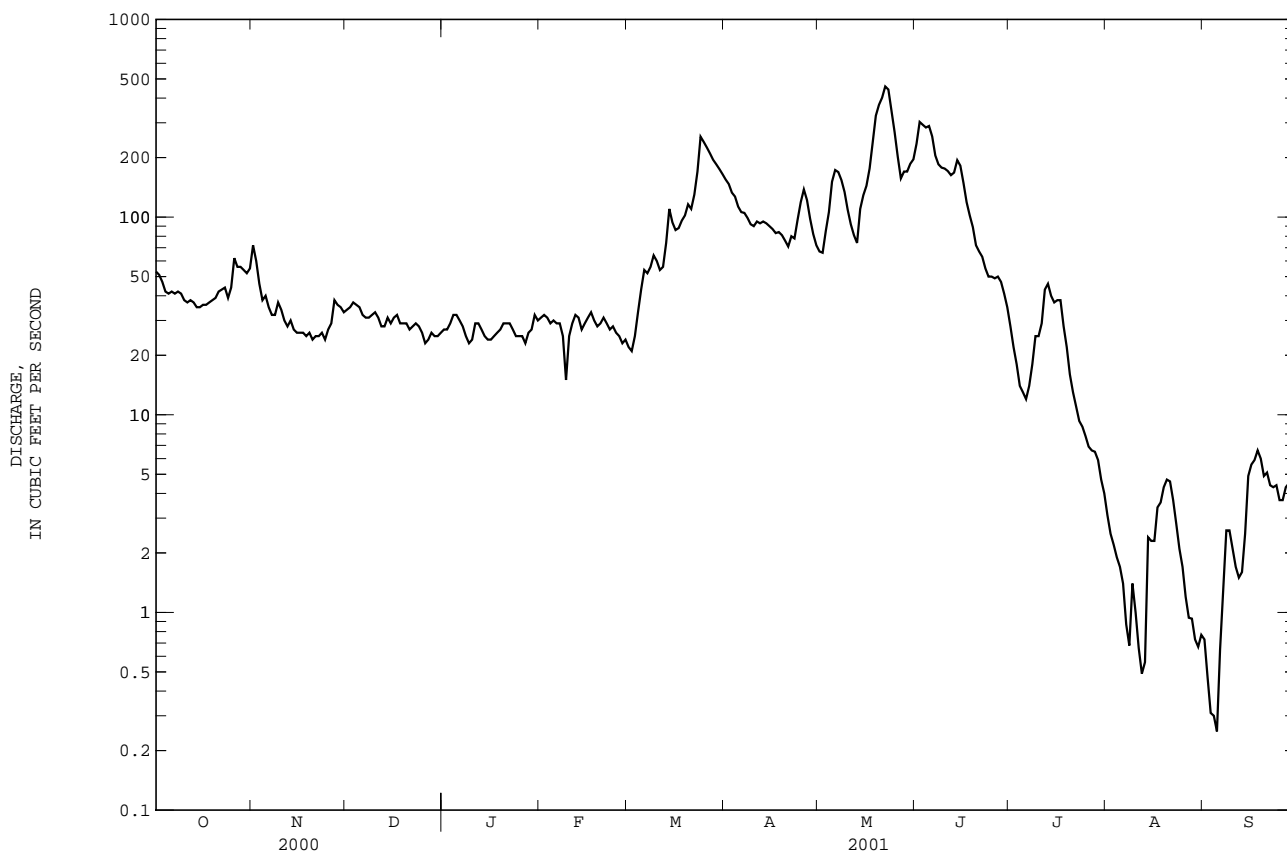
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1973 - 2001	
ANNUAL TOTAL	28927.2		22300.11		--	
ANNUAL MEAN	79.0		61.1		159	
HIGHEST ANNUAL MEAN	--		--		475	
LOWEST ANNUAL MEAN	--		--		39.4	
HIGHEST DAILY MEAN	570	Jun 3	458	May 22	4390	Jun 28 1983
LOWEST DAILY MEAN	1.1	Sep 19	.25	Sep 5	.00	Oct 10 1987
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 15	.50	Aug 31	.03	Oct 9 1987
MAXIMUM PEAK FLOW	--		478 <sup>c</sup>		4480 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		3.41 <sup>b</sup>		8.40 <sup>b</sup>	
ANNUAL RUNOFF (AC-FT)	57380		44230		115200	
10 PERCENT EXCEEDS	140		169		358	
50 PERCENT EXCEEDS	46		32		65	
90 PERCENT EXCEEDS	9.1		2.6		14	

a Gage height, 7.39 ft.

b Ice jam.

c Gage height, 2.78 ft.

e Estimated.



06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY

LOCATION.--Lat 41°50'39", long 105°13'15", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.27, T.22 N., R.70 W., Platte County, Hydrologic Unit 10180011, on right bank just upstream from bridge on U.S. Highway 34, 900 ft upstream from Mule Creek, 2.9 mi upstream from Bluegrass Creek, and 20 mi southwest of Wheatland.

DRAINAGE AREA.--194 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1974 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,340 ft above sea level, from topographic map.

REMARKS.--Records fair. Seven small diversions upstream from station, combined capacity, about 400 acre-ft, for irrigation. Diversions upstream from station for irrigation of about 2,020 acres, of which about 80 acres are downstream from station.

COOPERATION.--Station operated and record provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	18	69	50	34	8.4	3.1
2	---	---	---	---	---	---	20	71	47	33	7.8	2.7
3	---	---	---	---	---	---	27	73	45	32	7.6	2.6
4	---	---	---	---	---	---	33	69	48	32	6.9	2.5
5	---	---	---	---	---	---	37	71	54	32	6.8	2.3
6	---	---	---	---	---	---	40	88	50	30	6.1	2.5
7	---	---	---	---	---	---	41	111	48	61	5.1	2.8
8	---	---	---	---	---	---	41	117	47	28	4.8	4.0
9	---	---	---	---	---	---	39	117	47	23	7.5	4.4
10	---	---	---	---	---	---	39	114	45	23	8.0	3.9
11	---	---	---	---	---	---	38	102	44	23	7.7	3.3
12	---	---	---	---	---	---	37	99	44	18	6.9	3.1
13	---	---	---	---	---	---	36	90	44	18	6.4	3.1
14	---	---	---	---	---	---	35	80	45	17	5.2	3.4
15	---	---	---	---	---	---	35	77	47	15	5.5	4.4
16	---	---	---	---	---	---	37	73	44	14	6.5	4.6
17	---	---	---	---	---	---	38	71	42	13	6.5	4.5
18	---	---	---	---	---	---	39	68	41	12	6.2	4.9
19	---	---	---	---	---	---	42	66	42	12	5.9	4.6
20	---	---	---	---	---	---	47	63	41	11	5.4	4.3
21	---	---	---	---	---	---	48	65	41	12	5.2	3.9
22	---	---	---	---	---	---	49	66	39	11	4.4	3.9
23	---	---	---	---	---	---	47	62	39	11	3.8	3.7
24	---	---	---	---	---	---	48	59	38	13	3.4	3.9
25	---	---	---	---	---	---	53	56	38	13	3.2	4.1
26	---	---	---	---	---	---	57	58	37	11	2.7	3.8
27	---	---	---	---	---	---	60	56	37	10	2.7	3.8
28	---	---	---	---	---	---	67	56	36	9.3	3.8	3.7
29	---	---	---	---	---	---	72	53	35	10	3.2	3.7
30	---	---	---	---	---	---	69	52	34	9.3	3.0	3.7
31	---	---	---	---	---	---	---	53	---	8.4	3.1	---
TOTAL	---	---	---	---	---	---	1289	2325	1289	599.0	169.7	109.2
MEAN	---	---	---	---	---	---	43.0	75.0	43.0	19.3	5.47	3.64
MAX	---	---	---	---	---	---	72	117	54	61	8.4	4.9
MIN	---	---	---	---	---	---	18	52	34	8.4	2.7	2.3
AC-FT	---	---	---	---	---	---	2560	4610	2560	1190	337	217

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2001, BY WATER YEAR (WY)\*

MEAN	4.24	---	---	---	---	7.75	32.2	66.6	44.9	23.7	13.5	6.14
MAX	4.24	---	---	---	---	7.75	201	533	382	193	62.7	23.3
(WY)	1989	---	---	---	---	1987	1983	1983	1983	1983	1983	1983
MIN	4.24	---	---	---	---	7.75	2.27	4.14	2.67	.89	.65	.92
(WY)	1989	---	---	---	---	1987	1977	1977	1989	1989	1989	1977

## PLATTE RIVER BASIN

06664400 SYBILLE CREEK ABOVE MULE CREEK, NEAR WHEATLAND, WY--Continued

## SUMMARY STATISTICS

## FOR 2001 WATER YEAR\*

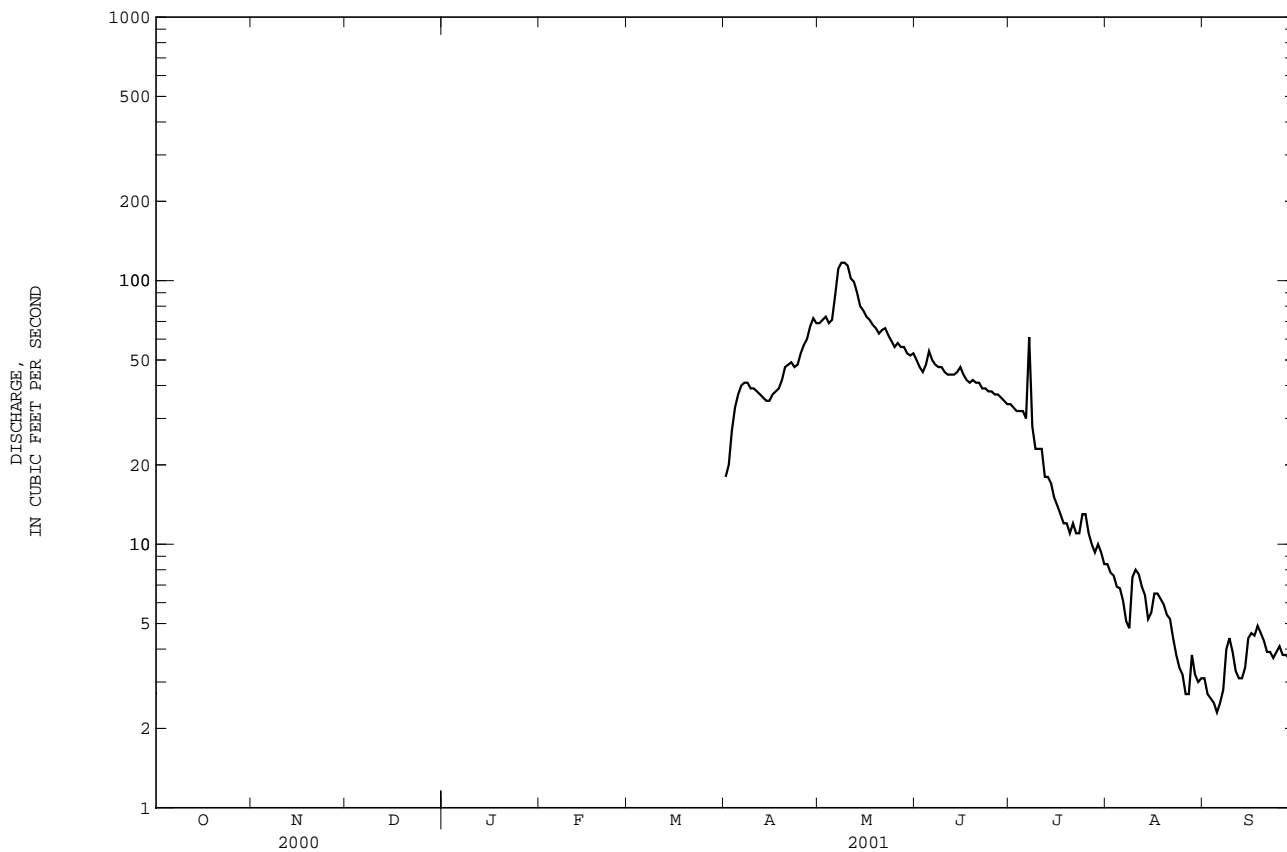
## WATER YEARS 1974 - 2001\*

HIGHEST DAILY MEAN	117	May 8,9	1280	Aug 20 1990
LOWEST DAILY MEAN	2.3	Sep 5	19900 <sup>a</sup> ,22	Sep 18 2000
MAXIMUM PEAK FLOW	203	Jul 7	19900 <sup>a</sup>	Aug 20 1990
MAXIMUM PEAK STAGE	3.59	Jul 7	15.60 <sup>b</sup>	Aug 20 1990

\* For period of operation.

a On basis of slope-area measurement of peak flow at site 1.2 mi upstream.

b From floodmarks.



06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY

LOCATION.--Lat 45°54'40", long 105°07'36", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 4, T.22 N., R.69 W., Platte County, Hydrologic Unit 10180011, on right bank 100 ft upstream from State Highway 34, 200 ft downstream from Deadhead Creek, 2.7 mi upstream from Canal No. 3, and 19.7 mi southwest of Wheatland.

PERIOD OF RECORD.--April 1980 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 5,040 ft above sea level, from topographic map.

REMARKS.--Records good, except for June 12-28, which is fair. Most of flow during irrigation season is water released from Wheatland Reservoir No. 2, capacity 98,930 acre-ft, on the Laramie River and diverted down Bluegrass Creek for irrigation of land near Wheatland. Diversions for irrigation of about 4,400 acres upstream from station.

COOPERATION.--Station operated and recorded provided by the Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	28	97	53	57	93	46
2	---	---	---	---	---	---	29	103	53	56	94	33
3	---	---	---	---	---	---	35	107	48	56	98	32
4	---	---	---	---	---	---	48	99	48	59	92	31
5	---	---	---	---	---	---	67	107	57	57	86	32
6	---	---	---	---	---	---	125	134	55	52	80	33
7	---	---	---	---	---	---	118	158	49	70	80	57
8	---	---	---	---	---	---	90	157	49	50	104	47
9	---	---	---	---	---	---	75	146	49	42	79	44
10	---	---	---	---	---	---	66	144	46	46	63	32
11	---	---	---	---	---	---	68	130	44	118	60	29
12	---	---	---	---	---	---	62	124	41	27	59	26
13	---	---	---	---	---	---	58	119	38	21	57	45
14	---	---	---	---	---	---	55	104	38	20	55	42
15	---	---	---	---	---	---	53	92	38	19	69	29
16	---	---	---	---	---	---	55	90	34	18	52	23
17	---	---	---	---	---	---	58	90	32	17	48	22
18	---	---	---	---	---	---	59	89	30	16	40	22
19	---	---	---	---	---	---	67	87	28	22	36	19
20	---	---	---	---	---	---	82	87	28	24	34	17
21	---	---	---	---	---	---	80	73	27	23	36	15
22	---	---	---	---	---	---	77	39	25	23	35	13
23	---	---	---	---	---	---	73	30	23	24	57	12
24	---	---	---	---	---	---	74	27	22	26	34	11
25	---	---	---	---	---	---	80	24	23	44	33	10
26	---	---	---	---	---	---	90	32	30	38	32	9.5
27	---	---	---	---	---	---	95	58	39	33	32	8.4
28	---	---	---	---	---	---	100	60	35	33	32	7.8
29	---	---	---	---	---	---	109	56	31	33	31	7.9
30	---	---	---	---	---	---	103	40	38	32	31	8.0
31	---	---	---	---	---	---	---	55	---	64	32	---
TOTAL	---	---	---	---	---	---	2179	2758	1151	1220	1764	763.6
MEAN	---	---	---	---	---	---	72.6	89.0	38.4	39.4	56.9	25.5
MAX	---	---	---	---	---	---	125	158	57	118	104	57
MIN	---	---	---	---	---	---	28	24	22	16	31	7.8
AC-FT	---	---	---	---	---	---	4320	5470	2280	2420	3500	1510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2001, BY WATER YEAR (WY)\*

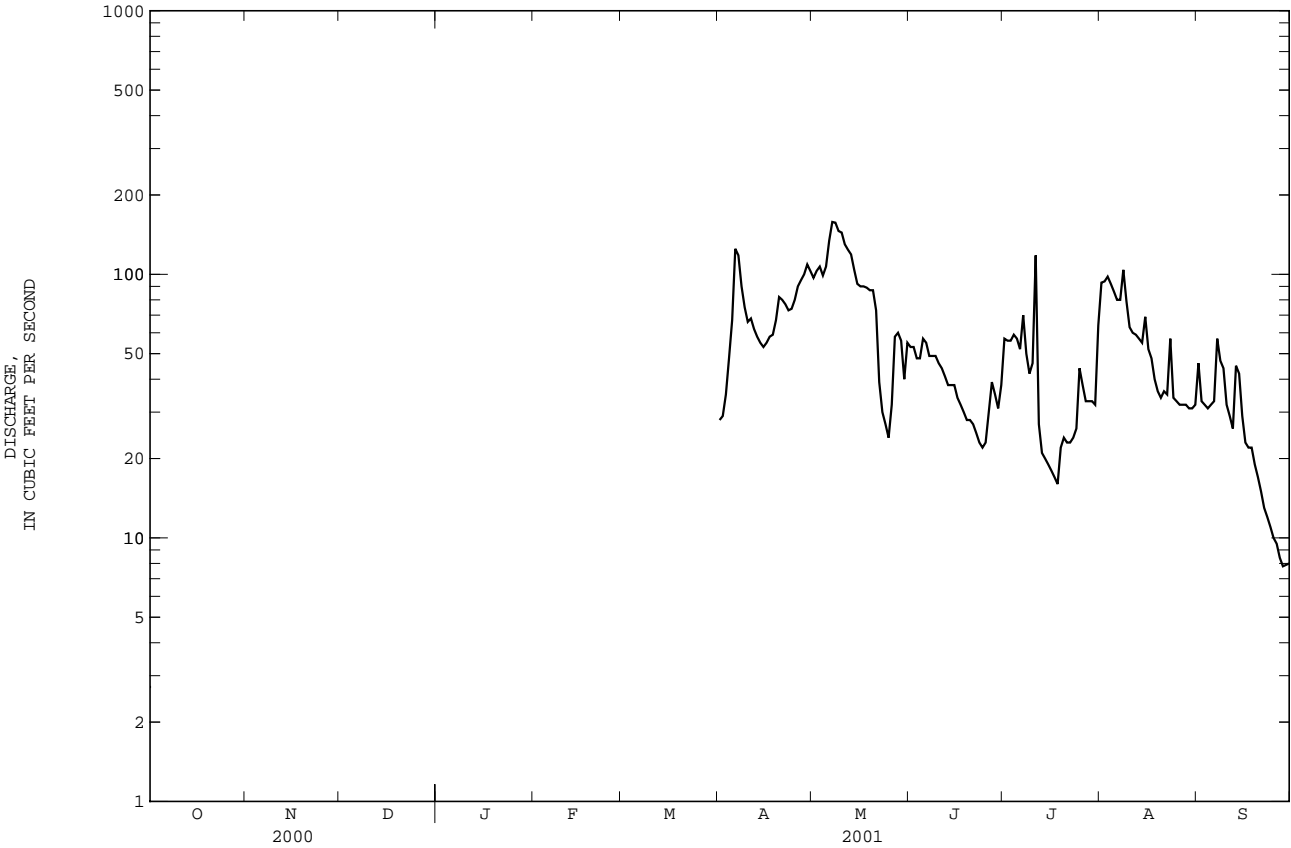
MEAN	29.0	---	---	---	---	25.5	56.7	111	85.0	85.2	72.2	36.0
MAX	29.0	---	---	---	---	25.5	260	665	347	191	192	68.3
(WY)	1989	---	---	---	---	1987	1983	1983	1983	1983	1983	1983
MIN	29.0	---	---	---	---	25.5	7.85	16.5	20.2	34.5	31.8	3.09
(WY)	1989	---	---	---	---	1987	1982	1989	1992	1992	1981	1989

PLATTE RIVER BASIN

06665790 SYBILLE CREEK ABOVE CANAL NO. 3, NEAR WHEATLAND, WY--Continued

SUMMARY STATISTICS	FOR 2001 WATER YEAR*		WATER YEARS 1980 - 2001*	
HIGHEST DAILY MEAN	158	May 7	1280	May 22 1983
LOWEST DAILY MEAN	7.8	Sep 28		Sep 1 1981
MAXIMUM PEAK FLOW	342	Jul 11	6900 <sup>a</sup>	Aug 20 1990
MAXIMUM PEAK STAGE	2.12	Jul 11	8.35 <sup>b</sup>	Aug 20 1990

\* For period of operation.  
a From rating curve extended above 1,300 ft<sup>3</sup>/s on basis of contracted opening measurement of peak flow.  
b From floodmarks.





## PLATTE RIVER BASIN

353

06669050 WHEATLAND CREEK BELOW WHEATLAND, WY

LOCATION.--Lat 42°05'05", long 104°57'02", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.1, T.24 N., R.68 W., Platte County, Hydrologic Unit 10180011, 50 ft upstream from bridge on U.S. Highway 87, 50 ft downstream from sewage lagoons, and 1.6 mi north of Wheatland city limits.

PERIOD OF RECORD.--Water years 1983 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, DIS- AMMONIA SOLVED (MG/L AS N) (00608)	NITRO- GEN, DIS- NO2+NO3 SOLVED (MG/L AS N) (00631)	NITRO- GEN, DIS- NITRITE SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 28...	0940	2.5	651	12.7	109	8.7	1220	2.0	2.5	.633	4.32	.023	.308
MAR 02...	0950	1.8	640	8.8	75	8.3	1240	8.0	1.5	4.45	2.14	.016	.706
JUN 12...	1250	.62	636	12.6	171	8.6	1240	24.0	21.0	1.50	3.14	.206	.864
SEP 05...	0915	.87	645	4.2	53	8.2	1290	21.0	18.0	.453	2.63	.095	.665

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 28...	E29k	61
MAR 02...	240	E310k
JUN 12...	1200	1200
SEP 05...	340	210

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## PLATTE RIVER BASIN

06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY

LOCATION.--Lat 42°12'02", long 104°32'16", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.28, T.26 N., R.64 W., Goshen County, Hydrologic Unit 10180011, on right bank 600 ft upstream from bridge on county road, 0.6 mi upstream from mouth, and 1.1 mi southwest of Fort Laramie.

DRAINAGE AREA.--4,564 mi<sup>2</sup>, of which 631 mi<sup>2</sup> probably is non-contributing. Drainage area at mouth, 4,565 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1915 to current year (no winter records prior to 1927). Monthly discharge only for some periods, published in WSP 1310. Records for water years 1926-39, previously published including diversions to Gering-Fort Laramie Canal, were adjusted to exclude flow in the canal in WSP 1310. Prior to October 1931, published as "at Fort Laramie." No diversion to Gering-Fort Laramie Canal since 1956.

REVISED RECORDS.--WSP 1918: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 4,257.04 ft above sea level, from topographic map. Apr. 4, 1915, to Mar. 31, 1925, nonrecording gage at site 0.1 mi downstream at different datum. Apr. 1, 1925, to Sept. 30, 1932, nonrecording gage and Oct. 1, 1932, to Aug. 20, 1935, water-stage recorder at site 4.3 mi upstream at different datum. Aug. 21, 1935, to Nov. 2, 1970, water-stage recorder at site 0.3 mi upstream at different datum. Nov. 3, 1970, to May 9, 1973, water-stage recorder 0.1 mi downstream at different datum. May 10, 1973, to Apr. 5, 1977, water-stage recorder 4.3 mi upstream at different datum.

REMARKS.--Records good except for dates Oct. 1 to Feb. 28, which are poor. Major regulation began after completion of Grey Rocks Reservoir in 1980. Diversion, at times, to Gering-Fort Laramie Canal, 5.4 mi upstream. Natural flow of stream affected by transbasin diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation of about 176,000 acres upstream from station, and return flow from irrigated areas. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

COOPERATION.--Five discharge measurements provided by the Wyoming State Engineer's Office.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	65	46	45	48	49	54	169	160	48	66	46
2	60	53	46	48	46	49	53	191	127	47	68	44
3	59	52	46	45	46	49	54	200	114	44	69	43
4	58	51	46	47	46	49	54	200	106	45	66	43
5	59	51	46	47	47	49	53	203	99	52	65	42
6	57	50	47	46	46	49	53	190	94	48	61	43
7	57	50	46	45	47	48	54	194	99	48	51	45
8	57	50	46	46	42	48	53	216	97	47	36	47
9	57	50	45	e45	48	47	52	234	76	40	42	48
10	57	51	41	e43	56	48	53	227	67	58	43	49
11	54	51	42	e41	55	48	57	216	64	105	43	49
12	53	50	52	42	52	48	54	216	62	183	40	55
13	52	56	55	42	49	47	53	218	60	133	37	51
14	52	58	51	42	47	46	53	226	58	72	37	50
15	48	56	46	44	51	46	53	230	56	69	40	59
16	46	53	46	44	56	46	53	215	54	103	53	61
17	47	53	50	45	51	47	53	216	54	70	56	62
18	49	54	47	42	52	47	53	210	53	63	58	61
19	50	52	51	43	51	47	52	207	65	60	57	63
20	49	52	45	42	50	47	53	205	71	55	54	62
21	49	54	49	41	49	47	54	176	68	55	57	62
22	46	51	45	41	49	46	60	163	67	55	55	60
23	45	49	44	41	49	49	57	127	72	60	56	59
24	46	49	43	40	50	50	56	120	70	58	55	58
25	62	49	44	40	49	50	55	106	66	57	55	53
26	56	50	48	40	48	51	55	93	62	57	48	48
27	53	49	55	44	49	50	54	76	53	57	49	47
28	53	48	46	45	50	50	54	60	42	58	45	45
29	51	46	50	45	---	50	54	56	45	60	44	47
30	52	46	46	45	---	51	78	48	46	63	44	47
31	53	---	46	45	---	54	---	113	---	63	45	---
TOTAL	1647	1549	1456	1351	1379	1502	1644	5321	2227	2033	1595	1549
MEAN	53.1	51.6	47.0	43.6	49.2	48.5	54.8	172	74.2	65.6	51.5	51.6
MAX	62	65	55	48	56	54	78	234	160	183	69	63
MIN	45	46	41	40	42	46	52	48	42	40	36	42
AC-FT	3270	3070	2890	2680	2740	2980	3260	10550	4420	4030	3160	3070

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2001, BY WATER YEAR (WY)

	MEAN	70.1	81.6	87.9	86.2	91.1	106	153	393	314	133	65.4	62.4
MAX	350	388	464	360	418	425	1056	3145	2967	1925	390	245	
(WY)	1985	1985	1985	1985	1984	1984	1984	1973	1983	1983	1984	1973	
MIN	13.9	10.4	6.35	6.32	17.3	21.7	37.5	25.3	17.3	23.1	8.73	15.0	
(WY)	1965	1981	1981	1981	1981	1983	1981	1963	1966	1966	1975	1964	

## 06670500 LARAMIE RIVER NEAR FORT LARAMIE, WY--Continued

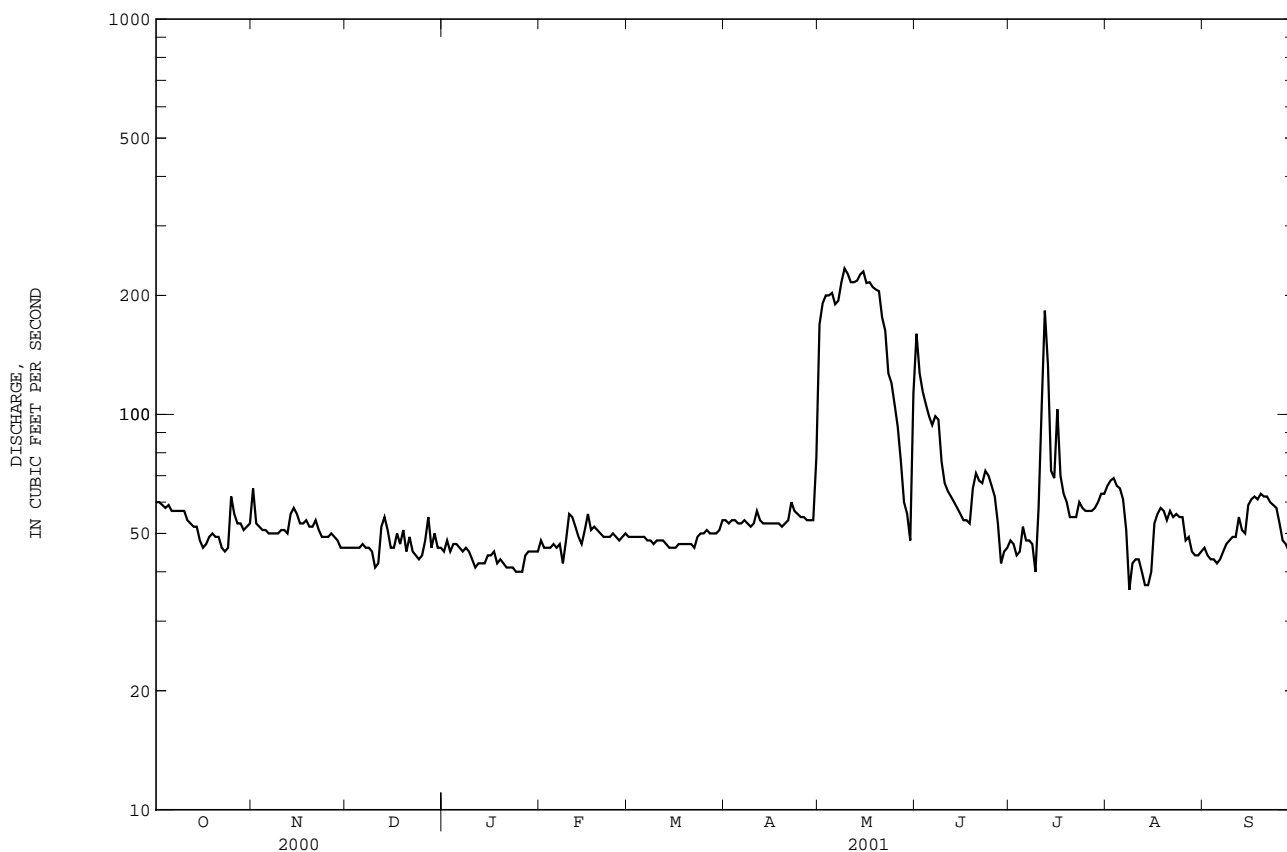
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1957 - 2001	
ANNUAL TOTAL	36946		23253		--	
ANNUAL MEAN	101		63.7		137	
HIGHEST ANNUAL MEAN	--		--		672	
LOWEST ANNUAL MEAN	--		--		26.1	
HIGHEST DAILY MEAN	950	May 22	234	May 9	5810	May 10 1973
LOWEST DAILY MEAN	36	Sep 16	36	Aug 8	2.0 <sup>a</sup>	Jan 23 1981
ANNUAL SEVEN-DAY MINIMUM	45	Dec 5	40	Aug 8	3.1	Jan 21 1981
MAXIMUM PEAK FLOW	--		243	May 15	6260	May 10 1973#
MAXIMUM PEAK STAGE	--		3.45	May 15	9.40 <sup>b</sup>	May 10 1973#
ANNUAL RUNOFF (AC-FT)	73280		46120		99370	
10 PERCENT EXCEEDS	141		98		220	
50 PERCENT EXCEEDS	63		51		64	
90 PERCENT EXCEEDS	48		44		30	

# For period of record, 1915-2001.

a No flow Jan. 31 to Mar. 20, Oct. 24 to Dec. 17, 1926, Mar. 1-26, 1927, Apr. 14, 1938; all flow directed by Gering-Fort Laramie Canal.

b Site and datum then in use.

e Estimated.



## PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE

LOCATION.--Lat 41°59'19", long 104°03'10", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.3, T.23 N., R.60 W., Goshen County, Hydrologic Unit 10180009, on right bank 2000 ft upstream from bridge on NE State Highway 86, 250 ft upstream from Wyoming-Nebraska State line, and 0.7 mi southeast of Henry, NE.

DRAINAGE AREA.--22,218 mi<sup>2</sup>, of which 1,929 mi<sup>2</sup> probably is non-contributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1929 to current year.

REVISED RECORDS.--WDR WY-76-1: Drainage area.

GAGE.--Water-stage recorder. Sheet-piling control since Mar. 9, 1994. Datum of gage is 4,025 ft above sea level, from topographic map. Prior to Nov. 6, 1929, non-recording gage and Nov. 6, 1929, to Sept. 30, 1959, water-stage recorder at site 0.2 mi upstream at different datum. Oct. 7, 1959 to Feb. 22, 1972 water-stage recorder at site 0.2 mi upstream at different datum. Feb. 22, 1972 to Mar. 9, 1994, water-stage recorder at site 0.3 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, transbasin diversions, power development, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas. Gering-Mitchell Canal diverts from right bank 0.5 mi upstream. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

COOPERATION.--Seven discharge measurements provided by Wyoming State Engineer's Office. Ten discharge measurements provided by U.S. Bureau of Reclamation and four discharge measurements provided by Nebraska Department of Natural Resources.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537	376	259	205	177	160	166	176	651	1400	1230	1020
2	454	374	250	205	179	164	166	208	700	1380	1270	960
3	407	360	250	205	178	170	167	256	735	1380	1310	898
4	379	354	248	205	175	170	165	281	784	1400	1350	883
5	361	348	245	205	176	170	165	308	776	1430	1380	814
6	344	341	243	205	175	170	165	331	670	1440	1390	763
7	343	348	243	205	177	173	169	310	616	1450	1410	751
8	339	324	243	204	e175	175	168	317	544	1420	1400	722
9	328	322	243	201	e170	175	168	331	407	1430	1400	684
10	336	317	e240	201	e175	180	165	351	330	2540	1370	655
11	349	315	e230	199	176	181	183	341	281	2410	1320	617
12	321	e310	e225	199	175	181	179	356	261	1840	1270	572
13	370	e305	e230	200	175	181	173	368	248	1670	1260	576
14	440	e300	235	197	175	181	168	374	231	1600	1260	579
15	429	299	230	194	e175	181	164	414	239	1600	1310	640
16	420	296	e225	194	170	179	159	595	221	1550	1330	650
17	410	294	e215	e190	169	176	159	663	238	1390	1320	651
18	400	e290	222	190	166	175	164	715	460	1270	1340	663
19	392	288	e220	190	165	174	177	677	715	1260	1310	615
20	386	286	218	190	164	172	173	673	792	1290	1270	953
21	377	281	e205	187	164	175	175	727	834	1340	1270	1090
22	379	279	e210	184	163	175	194	744	839	1400	1250	951
23	375	278	211	181	161	173	197	701	891	1390	1250	588
24	375	277	211	181	168	170	205	662	1010	1400	1250	481
25	376	272	211	181	164	170	197	611	1190	1430	1210	532
26	366	271	e205	180	161	170	186	568	1280	1540	1160	525
27	361	271	208	177	160	171	178	558	1390	1490	1150	525
28	358	271	209	178	160	170	175	603	1440	1480	1140	517
29	354	265	207	181	---	170	175	642	1400	1480	1120	510
30	349	265	205	181	---	170	175	666	1430	1430	1080	496
31	344	---	208	e180	---	168	---	666	---	1330	1040	---
TOTAL	11759	9177	7004	5975	4768	5370	5220	15193	21603	46860	39420	20881
MEAN	379	306	226	193	170	173	174	490	720	1512	1272	696
MAX	537	376	259	205	179	181	205	744	1440	2540	1410	1090
MIN	321	265	205	177	160	160	159	176	221	1260	1040	481
AC-FT	23320	18200	13890	11850	9460	10650	10350	30140	42850	92950	78190	41420

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2001, BY WATER YEAR (WY)

	MEAN	505	420	371	329	334	505	662	1192	1681	1552	1269	863
MAX	1666	1454	895	751	1063	4202	4407	7226	10360	7170	5751	4766	
(WY)	1987	1987	1930	1930	1984	1974	1974	1971	1929	1983	1983	1983	
MIN	150	174	191	166	148	141	141	43.9	49.1	611	154	230	
(WY)	1957	1935	1991	1993	1993	1991	1991	1990	1992	1934	1934	1934	

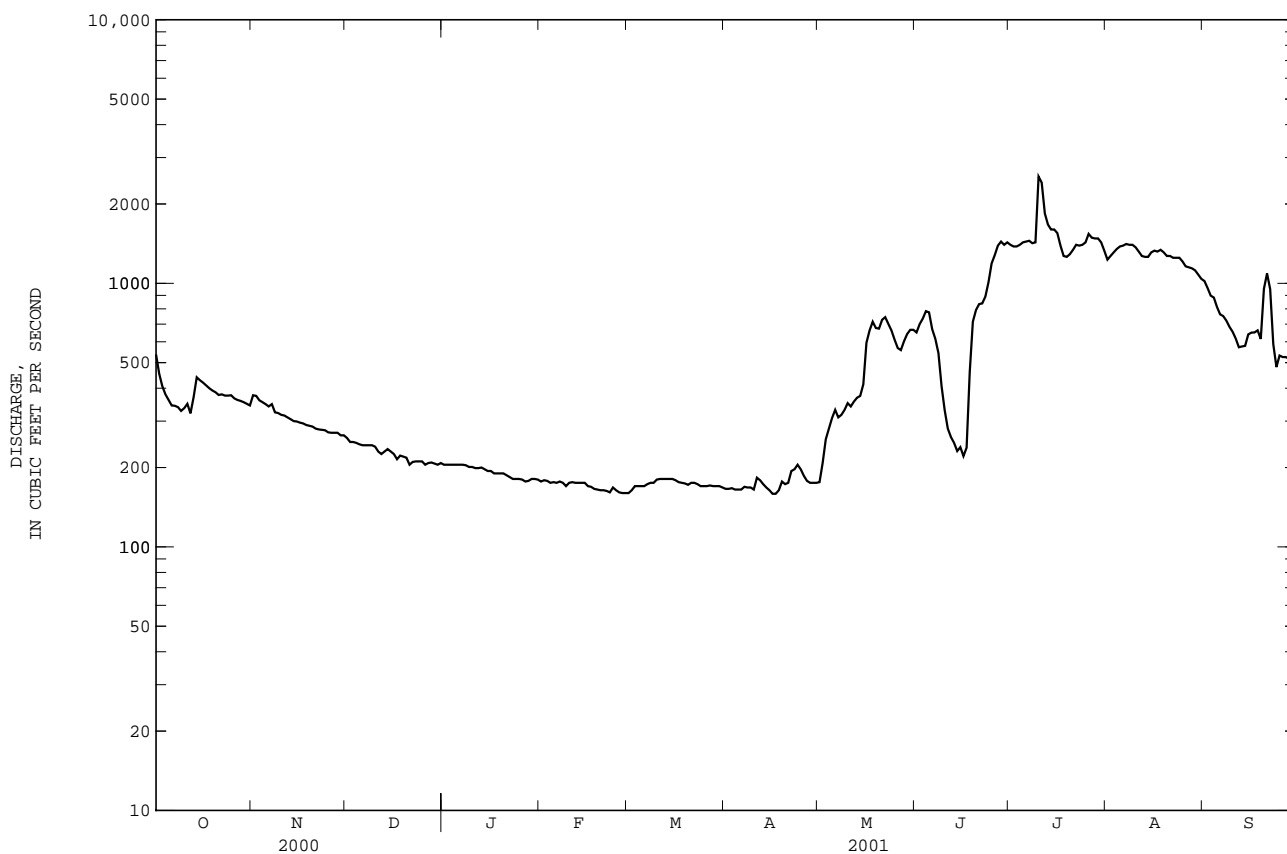
06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1929 - 2001	
ANNUAL TOTAL	227858		193230		--	
ANNUAL MEAN	623		529		791	
HIGHEST ANNUAL MEAN	--		--		2863	1984
LOWEST ANNUAL MEAN	--		--		388	1992
HIGHEST DAILY MEAN	1810	May 25	2540	Jul 10	17600	Jun 2 1929
LOWEST DAILY MEAN	195	Apr 7	159	Apr 16	3.9	May 13 1992
ANNUAL SEVEN-DAY MINIMUM	200	Apr 1	162	Feb 23	4.4	Jun 20 1992
MAXIMUM PEAK FLOW	--		2860	Jul 10	17900 <sup>a</sup>	Jun 2 1929
MAXIMUM PEAK STAGE	--		3.93	Jul 10	7.04 <sup>b</sup>	Jun 2 1929
ANNUAL RUNOFF (AC-FT)	452000		383300		572900	
10 PERCENT EXCEEDS	1340		1360		1470	
50 PERCENT EXCEEDS	376		310		485	
90 PERCENT EXCEEDS	216		170		206	

a Maximum observed.

b Site and datum then in use.

e Estimated.



## PLATTE RIVER BASIN

06674500 NORTH PLATTE RIVER AT WYOMING-NEBRASKA STATE LINE--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 09...	0730	309	652	11.2	99	8.2	912	-4.0	3.5	E.040	2.32	.021	E.014
JAN 09...	1230	210	662	12.4	108	8.1	956	3.5	3.5	.164	2.50	.035	.023
JUN 27...	1335	1500	663	8.6	114	8.1	707	34.0	22.0	<.040	.118	.009	<.020
AUG 30...	0955	1180	662	7.6	95	7.8	658	22.0	19.0	<.040	E.481	E.003	<.020

DATE	SEDI- MENT, DIS- SOLVED SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
NOV 09...	129	108
JAN 09...	95	54
JUN 27...	224	907
AUG 30...	124	395

E -- Estimated value.

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY

LOCATION.--Lat 41°07'52", long 104°49'41", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, on right bank at upstream side of 19th Street, at Cheyenne, and 0.5 mi upstream from Clear Creek.

DRAINAGE AREA.--257 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year.

REVISED RECORDS.--WDR WY-96-1: 1994; WDR WY-99-1: 1997.

GAGE.--Water-stage recorder. Elevation of gage is 6,050 ft above sea level, from topographic map.

REMARKS.--Records fair, except for August through September and estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 20, 1904, stage unknown, estimated 8,500 ft<sup>3</sup>/s; flood of August 1, 1985, reached a stage of 9.6 ft, present datum, from floodmarks, discharge, 2,980 ft<sup>3</sup>/s, on basis of indirect measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	8.8	e2.0	e2.0	e1.5	e2.4	3.1	6.5	6.0	3.4	3.9	3.6
2	1.6	5.2	e2.0	e2.0	e1.6	e2.7	3.1	12	5.7	2.6	3.9	3.6
3	1.5	5.0	2.1	e2.1	1.6	e2.9	3.9	11	7.1	2.2	4.0	3.6
4	1.5	4.5	e2.1	e2.2	e1.8	e3.3	3.2	12	11	2.0	3.8	3.7
5	1.5	4.7	e2.1	e2.3	2.8	3.5	2.7	23	7.2	1.8	3.8	3.7
6	1.5	4.5	e2.2	e2.2	e2.3	3.8	3.2	23	6.4	2.0	7.3	5.0
7	1.4	3.8	e2.2	e2.1	e2.2	4.1	2.8	23	9.1	1.8	4.4	3.9
8	1.3	2.3	e2.2	e2.0	e1.8	3.8	2.4	19	6.7	3.4	6.5	4.0
9	1.3	2.2	e2.2	e2.0	e1.7	3.5	2.6	18	5.2	3.1	6.4	4.3
10	1.2	2.1	e2.1	e2.0	1.9	2.7	3.6	18	4.2	3.1	5.4	4.3
11	1.3	1.9	e2.0	e2.0	2.1	2.8	6.4	16	3.9	4.1	5.2	4.1
12	1.6	1.7	e2.1	e2.1	e2.3	2.4	7.8	14	3.6	3.4	4.7	3.6
13	2.6	1.9	e2.1	e2.0	e2.2	2.3	6.8	13	3.2	25	3.9	3.2
14	1.4	2.0	e2.2	e2.0	e2.0	2.2	6.0	12	2.8	27	3.6	5.7
15	1.3	1.9	e2.2	e1.9	e1.8	2.4	5.1	12	2.5	10	3.5	7.1
16	1.7	1.9	e2.1	e1.8	e1.7	2.7	4.3	9.9	2.3	6.3	3.6	7.6
17	1.6	2.0	e2.2	e1.6	e1.7	2.5	3.1	8.6	2.1	4.7	3.1	3.9
18	1.5	e1.8	e2.2	e1.5	e1.8	2.4	3.3	9.3	2.0	3.9	3.0	2.8
19	1.4	2.0	e2.3	e1.7	1.9	2.4	3.1	12	1.9	3.5	3.4	2.2
20	1.5	2.0	e2.2	e1.8	e2.1	2.5	2.7	11	2.1	3.7	3.6	1.6
21	1.4	2.0	e2.1	e1.9	2.2	3.0	4.5	11	2.3	3.8	3.3	1.6
22	2.9	2.0	e2.2	e2.0	e2.6	3.3	7.5	11	4.0	3.9	4.8	1.2
23	2.3	e2.4	e2.3	e1.9	e2.5	3.0	12	10	2.8	4.5	7.7	.66
24	1.6	e2.7	e2.2	e1.8	e2.4	2.9	9.8	9.3	2.2	4.9	6.2	.65
25	1.4	e2.1	e2.1	e1.8	e2.4	2.7	12	9.0	2.1	4.5	5.3	.72
26	1.3	2.0	e2.1	e1.8	e2.3	2.7	12	8.7	2.2	4.6	4.1	.79
27	1.3	2.0	e2.2	e1.7	e2.2	2.9	11	12	2.6	3.9	2.7	1.3
28	1.5	2.1	e2.2	1.7	e2.3	2.9	9.9	9.2	2.7	3.8	3.2	1.7
29	1.4	e2.0	e2.1	e1.7	---	3.4	9.2	7.8	4.8	3.6	3.4	1.8
30	1.3	e2.1	e2.1	e1.6	---	3.6	7.6	8.4	5.2	3.1	3.2	2.1
31	5.8	---	e2.0	e1.5	---	3.5	---	7.0	---	3.6	3.3	---
TOTAL	52.8	83.6	66.4	58.7	57.7	91.2	174.7	386.7	125.9	161.2	134.2	94.02
MEAN	1.70	2.79	2.14	1.89	2.06	2.94	5.82	12.5	4.20	5.20	4.33	3.13
MAX	5.8	8.8	2.3	2.3	2.8	4.1	12	23	11	27	7.7	7.6
MIN	1.2	1.7	2.0	1.5	1.5	2.2	2.4	6.5	1.9	1.8	2.7	.65
AC-FT	105	166	132	116	114	181	347	767	250	320	266	186

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

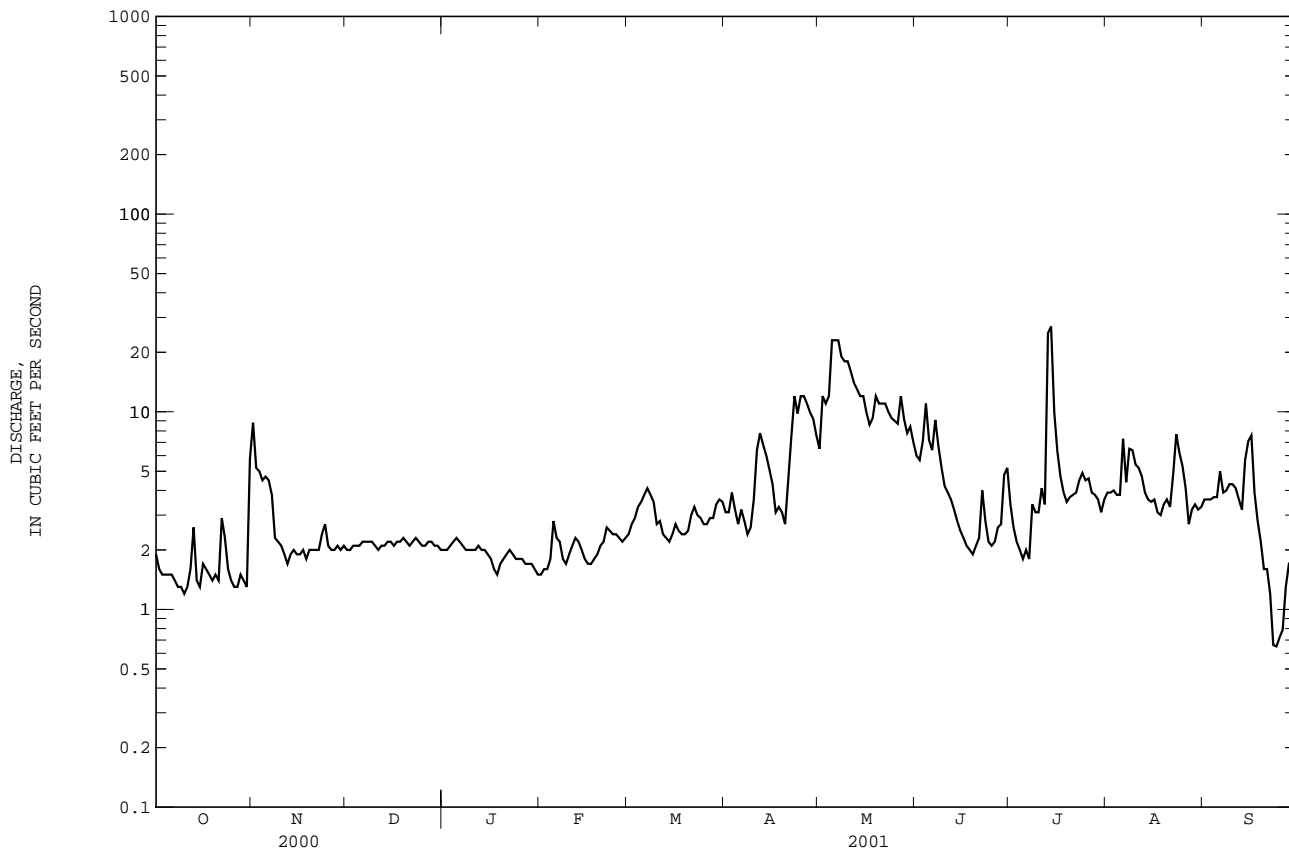
MEAN	6.79	8.35	6.85	6.57	7.31	8.68	12.4	43.1	28.0	8.07	7.13	5.13
MAX	26.3	29.7	19.9	14.8	13.0	17.5	27.3	252	90.1	26.7	30.0	19.4
(WY)	1998	1998	1998	1998	1998	1998	1999	1999	1999	1995	1997	1997
MIN	1.70	1.46	1.39	1.48	1.61	1.60	1.95	2.90	.90	1.43	1.65	1.07
(WY)	2001	1995	1995	1995	1995	1995	1995	2000	2000	2000	1994	1998

## PLATTE RIVER BASIN

06755960 CROW CREEK AT 19TH STREET, AT CHEYENNE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1994 - 2001
ANNUAL TOTAL	1718.69	1487.12	--
ANNUAL MEAN	4.70	4.07	12.4
HIGHEST ANNUAL MEAN	--	--	37.4
LOWEST ANNUAL MEAN	--	--	2.64
HIGHEST DAILY MEAN	15 Mar 30	27 Jul 14	579 May 1 1999
LOWEST DAILY MEAN	.38 Aug 8	.65 Sep 24	.38 Aug 8 2000
ANNUAL SEVEN-DAY MINIMUM	.48 Sep 12	.99 Sep 21	.48 Sep 12 2000
MAXIMUM PEAK FLOW	--	147 Jul 13	687 Apr 30 1999
MAXIMUM PEAK STAGE	--	3.41 Jul 13	5.56 Apr 30 1999
ANNUAL RUNOFF (AC-FT)	3410	2950	8970
10 PERCENT EXCEEDS	12	9.0	23
50 PERCENT EXCEEDS	2.2	2.7	5.4
90 PERCENT EXCEEDS	.56	1.6	1.4

e Estimated.





06756060 CROW CREEK NEAR ARCHER, WY

LOCATION.--Lat 41°07'35", long 104°39'04", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.3, T. 13 N., R.65 W., Laramie County, Hydrologic Unit 10190009, 0.4 mi upstream from highwater line of Wyoming Hereford Ranch Reservoir No. 2, and 2.3 mi southeast of Archer.

PERIOD OF RECORD.--November 1990 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED SATUR- ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
NOV 28...	1420	8.8	620	7.4	70	7.9	810	2.0	4.0	15.3	1.00	.079	2.17
MAR 02...	1420	13	610	9.3	97	8.1	884	9.0	7.5	11.9	1.17	.111	1.94
JUN 12...	0815	13	612	6.1	79	7.9	809	18.0	17.0	<.210	1.22	.226	<.090
SEP 05...	1320	7.2	618	8.6	118	8.1	740	26.0	20.0	1.86	2.88	.345	.699

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV 28...	150	170
MAR 02...	100	140
JUN 12...	620	590
SEP 05...	270	220

## COLORADO RIVER BASIN

## GREEN RIVER BASIN

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY

LOCATION.--Lat 43°01'08", long 110°07'03", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.8, T.35 N., R.111 W., Sublette County, Hydrologic Unit 14040101, on right bank 100 ft upstream from bridge on U.S. Highways 189 and 191, 3.4 mi upstream from Beaver Creek, and 12 mi north of Daniel.

DRAINAGE AREA.--468 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1931 to September 1992, October 1993 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 979: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 7,468.09 ft above sea level. Prior to Oct. 6, 1977, on left bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 10,200 acres, of which about 6,100 acres are downstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	173	e100	e100	e94	e90	e140	543	836	826	244	187
2	167	166	e105	e100	e94	e95	e155	579	905	743	242	192
3	167	132	e105	e95	e92	e100	e150	438	1020	700	242	184
4	162	e130	e110	e97	e92	e105	e145	348	990	674	248	183
5	156	e120	e110	e100	e92	e110	e145	340	757	657	262	185
6	152	109	e110	e110	e90	e110	e150	402	557	646	270	188
7	147	111	e105	e105	e90	e110	e145	370	454	651	273	198
8	146	e110	e105	e105	e90	e115	e140	363	412	682	276	204
9	144	e105	e110	e105	e86	e120	e135	443	488	657	273	205
10	141	e100	e105	e110	e88	e125	e140	481	649	604	277	189
11	156	e95	e100	e105	e90	e120	e155	485	854	583	275	170
12	173	e90	e93	e100	e92	e115	e165	495	964	578	261	156
13	174	e94	e96	e100	e92	e115	e170	551	951	561	248	151
14	174	e100	e105	e100	e94	e115	e165	691	809	511	241	150
15	173	e105	e110	e95	e95	e110	e175	998	626	475	234	148
16	166	e100	e105	e93	e94	e105	149	1650	514	451	231	148
17	163	e98	e105	e90	e94	e110	170	1950	457	454	229	152
18	159	e96	e110	e93	e94	e120	237	1590	442	433	221	160
19	158	e94	e110	e93	e92	e130	316	1140	451	405	213	158
20	157	e93	e105	e94	e92	e140	305	969	456	367	211	149
21	153	e96	e100	e97	e92	e145	236	829	463	328	216	145
22	153	e97	e100	e105	e94	e140	210	698	520	307	215	138
23	152	e96	e105	e98	e96	e150	222	618	644	303	209	133
24	149	e96	e105	e95	e96	e160	253	686	835	303	202	130
25	156	e96	e105	e95	e92	e180	292	847	974	293	192	131
26	163	e94	e100	e94	e89	e175	361	1030	1100	284	188	128
27	159	e98	e100	e92	e89	e165	414	1200	1120	279	185	130
28	156	e98	e105	e92	e88	e155	443	1320	1050	274	183	131
29	157	e94	e105	e90	---	e145	514	1280	1020	260	184	128
30	173	e98	e100	e88	---	e145	533	1100	928	249	189	129
31	174	---	e100	e92	---	e145	---	994	---	245	184	---
TOTAL	4952	3184	3229	3028	2573	3965	6930	25428	22246	14783	7118	4780
MEAN	160	106	104	97.7	91.9	128	231	820	742	477	230	159
MAX	174	173	110	110	96	180	533	1950	1120	826	277	205
MIN	141	90	93	88	86	90	135	340	412	245	183	128
AC-FT	9820	6320	6400	6010	5100	7860	13750	50440	44120	29320	14120	9480

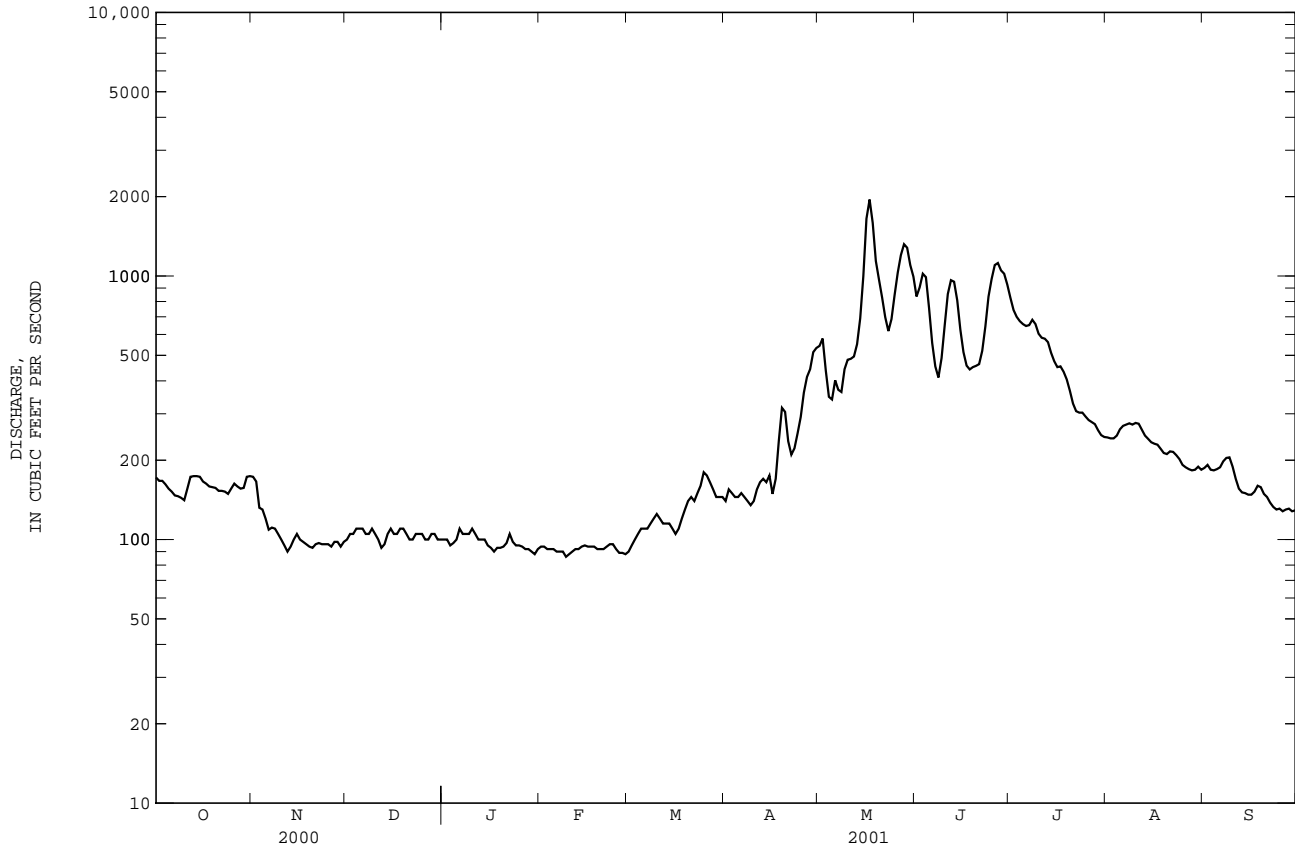
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

	200	145	125	110	111	124	288	1029	1791	1257	539	301
MEAN	200	145	125	110	111	124	288	1029	1791	1257	539	301
MAX	433	223	215	176	166	240	600	1811	3813	2424	997	592
(WY)	1984	1983	1997	1967	1967	1932	1943	1956	1986	1975	1982	1963
MIN	102	67.7	70.0	50.0	60.0	70.0	129	269	610	399	213	150
(WY)	1989	1994	1933	1933	1933	1933	1970	1977	1934	1988	1988	1988

09188500 GREEN RIVER AT WARREN BRIDGE, NEAR DANIEL, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1932 - 2001	
ANNUAL TOTAL	143041		102216		--	
ANNUAL MEAN	391		280		503	
HIGHEST ANNUAL MEAN	--		--		768	1986
LOWEST ANNUAL MEAN	--		--		280	2001
HIGHEST DAILY MEAN	1920	May 26	1950	May 17	5620	Jun 11 1997
LOWEST DAILY MEAN	90	Nov 12	86	Feb 9	36	Nov 26 1933
ANNUAL SEVEN-DAY MINIMUM	95	Nov 18	89	Feb 5	43	Nov 24 1933
MAXIMUM PEAK FLOW	--		2050	May 17	5930	Jun 11 1997
MAXIMUM PEAK STAGE	--		4.03	May 17	6.04	Jun 11 1997
ANNUAL RUNOFF (AC-FT)	283700		202700		364600	
10 PERCENT EXCEEDS	975		684		1420	
50 PERCENT EXCEEDS	180		156		200	
90 PERCENT EXCEEDS	105		94		100	

e Estimated.



## GREEN RIVER BASIN

09196500 PINE CREEK ABOVE FREMONT LAKE, WY

LOCATION.--Lat 43°01'50", long 109°46'10", in SW<sup>1</sup>/<sub>4</sub> S<sup>1</sup>/<sub>2</sub> sec.5, T.35 N., R.108 W., Sublette County, Hydrologic Unit 14040102, Bridger National Forest, on right bank 0.5 mi upstream from Fremont Lake, 0.5 mi downstream from Fremont Creek, and 12 mi northeast of Pinedale.

DRAINAGE AREA.--75.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to September 1997, and October 2000 to September 2001.

REVISED RECORDS.--WSP 1443: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,450 ft above sea level, from topographic map. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records good except for those estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	34	19	e18	12	14	13	144	e720	299	78	41
2	37	32	18	e18	12	14	16	132	e760	276	75	40
3	36	32	19	e17	12	13	18	122	e820	266	72	39
4	34	31	18	e16	12	12	19	116	e700	256	70	38
5	34	31	19	e16	11	12	19	128	e540	244	67	38
6	33	31	17	e15	12	12	21	144	e410	234	65	39
7	33	31	17	e15	12	12	20	144	310	229	64	37
8	33	31	16	e16	13	12	22	181	378	229	63	37
9	33	31	16	e17	e11	11	27	242	459	218	63	37
10	33	31	16	e18	e13	11	27	264	573	206	63	37
11	33	31	e15	e19	14	11	25	305	607	205	63	37
12	33	31	e14	e18	15	10	22	367	581	200	63	37
13	33	32	e13	18	15	10	22	460	545	192	62	37
14	33	30	e12	17	14	10	22	611	444	178	61	37
15	33	30	e13	17	13	12	23	883	356	173	60	37
16	33	29	e14	16	13	10	21	1500	312	167	58	37
17	33	30	e15	17	13	12	23	1050	299	158	56	37
18	33	29	e16	18	12	9.7	28	801	289	151	54	37
19	33	29	e17	17	12	9.7	33	771	282	142	52	37
20	33	28	e16	17	13	10	34	781	282	133	51	37
21	34	26	e17	16	15	11	34	747	286	126	51	37
22	34	25	e17	15	15	e12	34	714	323	117	49	36
23	34	24	e17	15	15	e14	34	738	410	109	48	35
24	34	20	e16	13	16	e15	34	807	460	103	47	34
25	37	19	e17	13	17	e17	37	872	483	99	46	33
26	36	18	e18	12	16	e21	52	896	481	96	46	32
27	36	17	e18	12	e14	e23	72	934	461	93	45	31
28	35	19	e19	12	e15	e21	96	937	449	90	44	30
29	35	19	e19	12	---	18	129	884	404	87	43	29
30	35	20	e18	12	---	16	143	e760	349	84	42	28
31	35	---	e17	12	---	14	---	e720	---	81	42	---
TOTAL	1059	821	513	484	377	409.4	1120	18155	13773	5241	1763	1078
MEAN	34.2	27.4	16.5	15.6	13.5	13.2	37.3	586	459	169	56.9	35.9
MAX	38	34	19	19	17	23	143	1500	820	299	78	41
MIN	33	17	12	12	11	9.7	13	116	282	81	42	28
AC-FT	2100	1630	1020	960	748	812	2220	36010	27320	10400	3500	2140

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2001, BY WATER YEAR (WY)

	MEAN	54.8	32.8	23.9	19.4	16.7	16.7	37.7	296	841	518	160	88.7
MAX	165	71.8	53.0	37.6	36.7	35.0	98.4	586	1476	1142	350	209	
(WY)	1984	1984	1978	1969	1969	1986	1962	2001	1986	1965	1968	1963	
MIN	9.60	10.9	6.73	4.39	4.66	4.03	12.0	90.3	384	117	44.0	23.0	
(WY)	1989	1989	1977	1977	1977	1977	1970	1975	1992	1988	1988	1988	

09196500 PINE CREEK ABOVE FREMONT LAKE, WY--Continued

## SUMMARY STATISTICS

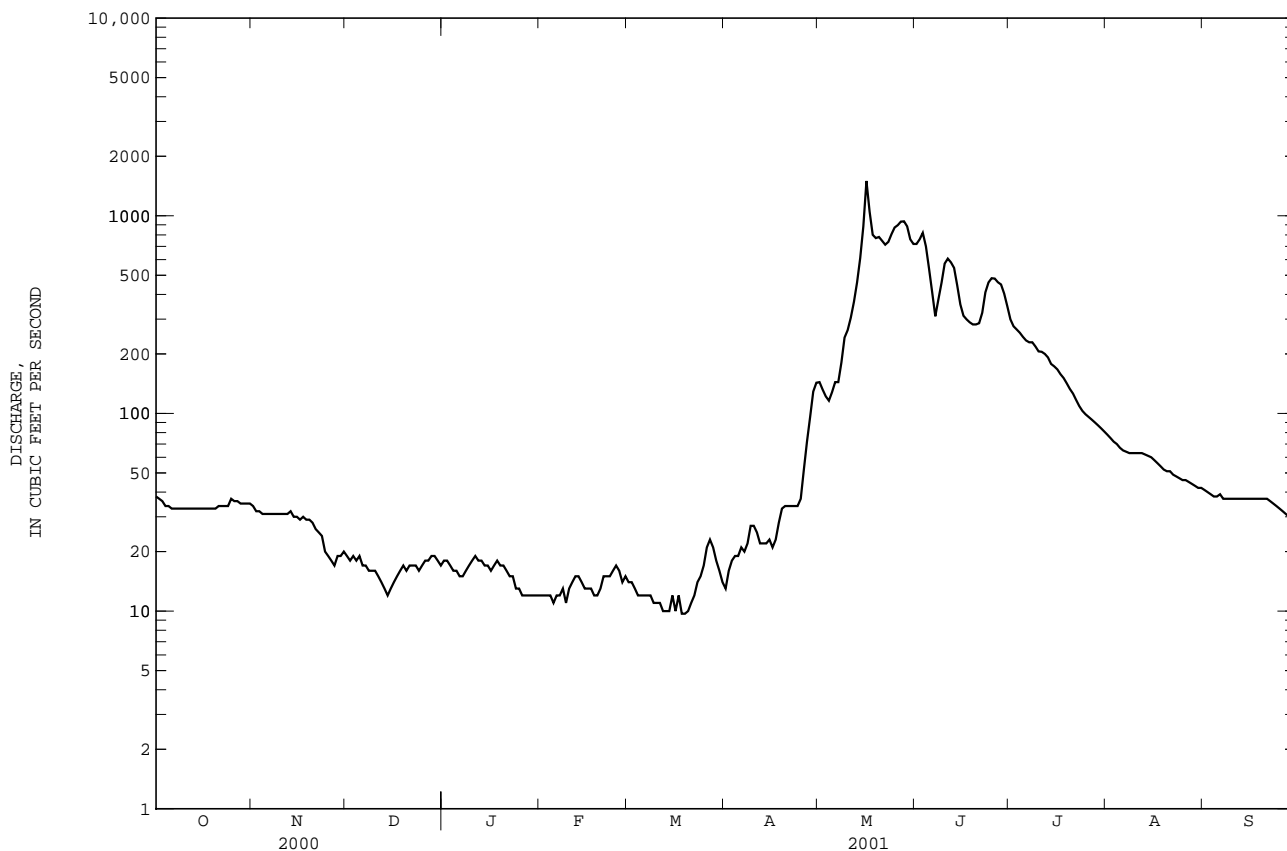
FOR 2001 WATER YEAR

WATER YEARS 1955 - 2001

ANNUAL TOTAL	44793.4	--	
ANNUAL MEAN	123	176	
HIGHEST ANNUAL MEAN	--	253	1986
LOWEST ANNUAL MEAN	--	96.7	1977
HIGHEST DAILY MEAN	1500	2290	Jun 10 1997
LOWEST DAILY MEAN	9.7	3.3	Apr 4 1977
ANNUAL SEVEN-DAY MINIMUM	10	3.4	Mar 31 1977
MAXIMUM PEAK FLOW	1660	2550 <sup>a</sup>	Jun 16 1959
MAXIMUM PEAK STAGE	5.98	7.65	Jun 6 1986
ANNUAL RUNOFF (AC-FT)	88850	127400	
10 PERCENT EXCEEDS	410	565	
50 PERCENT EXCEEDS	33	42	
90 PERCENT EXCEEDS	13	13	

a Gage height, 7.15 ft.

e Estimated.



## GREEN RIVER BASIN

09197000 PINE CREEK BELOW FREMONT LAKE, WY

LOCATION.--Lat 42°53'42", long 109°50'35", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.27, T.34 N., R.109 W., Sublette County, Hydrologic Unit 14040102, on left bank at Lot Number 93, 0.9 mi downstream from Fremont Lake, and 2.1 mi northeast of Pinedale.

DRAINAGE AREA.--114 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1910 to September 1912, October 1915 to September 1918, April 1985 to September 1986, April 1988 to current year, (no winter records since 1918). Published as "near Pinedale" prior to October 1912 and as "at Fremont Lake Outlet" October 1915 to September 1918. Records since April 1985 equivalent to earlier records if diversions to Highland Ditch (station 09196960) are added to flow past station.

GAGE.--Water-stage recorder. Elevation of gage is 7,390 ft above sea level, from topographic map. Prior to September 30, 1918, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.--Records good. Some regulation by Fremont Lake. Fremont Ditch and Highland Ditch divert water upstream from station for irrigation downstream from station. Results of discharge measurements, in cubic feet per second, made when station was not in operation, are given below:

Oct. 9 . . . 19.3  
Mar. 26 . . . 14.1

COOPERATION.--Station operated and record provided by Wyoming State Engineer's Office; record reviewed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	15	17	227	159	79	58
2	---	---	---	---	---	---	15	29	248	152	79	58
3	---	---	---	---	---	---	15	52	274	147	79	57
4	---	---	---	---	---	---	15	62	289	144	79	57
5	---	---	---	---	---	---	15	62	286	141	79	57
6	---	---	---	---	---	---	15	62	270	141	79	56
7	---	---	---	---	---	---	15	73	251	141	79	54
8	---	---	---	---	---	---	15	84	237	139	79	53
9	---	---	---	---	---	---	15	84	230	138	73	52
10	---	---	---	---	---	---	15	84	232	137	47	51
11	---	---	---	---	---	---	16	85	241	136	41	50
12	---	---	---	---	---	---	16	105	254	134	41	50
13	---	---	---	---	---	---	16	119	269	133	41	50
14	---	---	---	---	---	---	16	122	266	133	41	48
15	---	---	---	---	---	---	16	127	258	132	40	47
16	---	---	---	---	---	---	16	196	246	128	40	47
17	---	---	---	---	---	---	17	325	233	128	40	47
18	---	---	---	---	---	---	17	408	251	128	40	47
19	---	---	---	---	---	---	17	457	246	126	40	28
20	---	---	---	---	---	---	17	479	205	120	40	20
21	---	---	---	---	---	---	17	473	192	113	40	19
22	---	---	---	---	---	---	17	467	178	113	39	18
23	---	---	---	---	---	---	17	458	157	109	51	18
24	---	---	---	---	---	---	17	408	146	104	60	18
25	---	---	---	---	---	---	17	318	148	98	60	17
26	---	---	---	---	---	---	17	220	153	96	60	18
27	---	---	---	---	---	---	17	184	158	96	60	18
28	---	---	---	---	---	---	17	187	160	92	60	18
29	---	---	---	---	---	---	17	192	162	81	58	17
30	---	---	---	---	---	---	17	198	161	81	58	17
31	---	---	---	---	---	---	---	210	---	80	59	---
TOTAL	---	---	---	---	---	---	484	6347	6628	3800	1761	1165
MEAN	---	---	---	---	---	---	16.1	205	221	123	56.8	38.8
MAX	---	---	---	---	---	---	17	479	289	159	79	58
MIN	---	---	---	---	---	---	15	17	146	80	39	17
AC-FT	---	---	---	---	---	---	960	12590	13150	7540	3490	2310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2001, BY WATER YEAR (WY)\*

MEAN	63.2	36.8	27.5	23.3	24.3	26.2	31.8	157	620	483	151	66.3
MAX	86.2	40.0	34.2	26.3	33.0	36.0	93.0	299	1273	1258	300	131
(WY)	1916	1911	1918	1918	1916	1916	1986	1997	1918	1917	1917	1917
MIN	49.9	30.0	20.0	20.0	18.0	20.0	14.9	63.3	215	95.0	43.9	22.8
(WY)	1917	1917	1917	1916	1917	1917	1988	1990	1992	1992	1988	1988

09197000 PINE CREEK BELOW FREMONT LAKE, WY--Continued

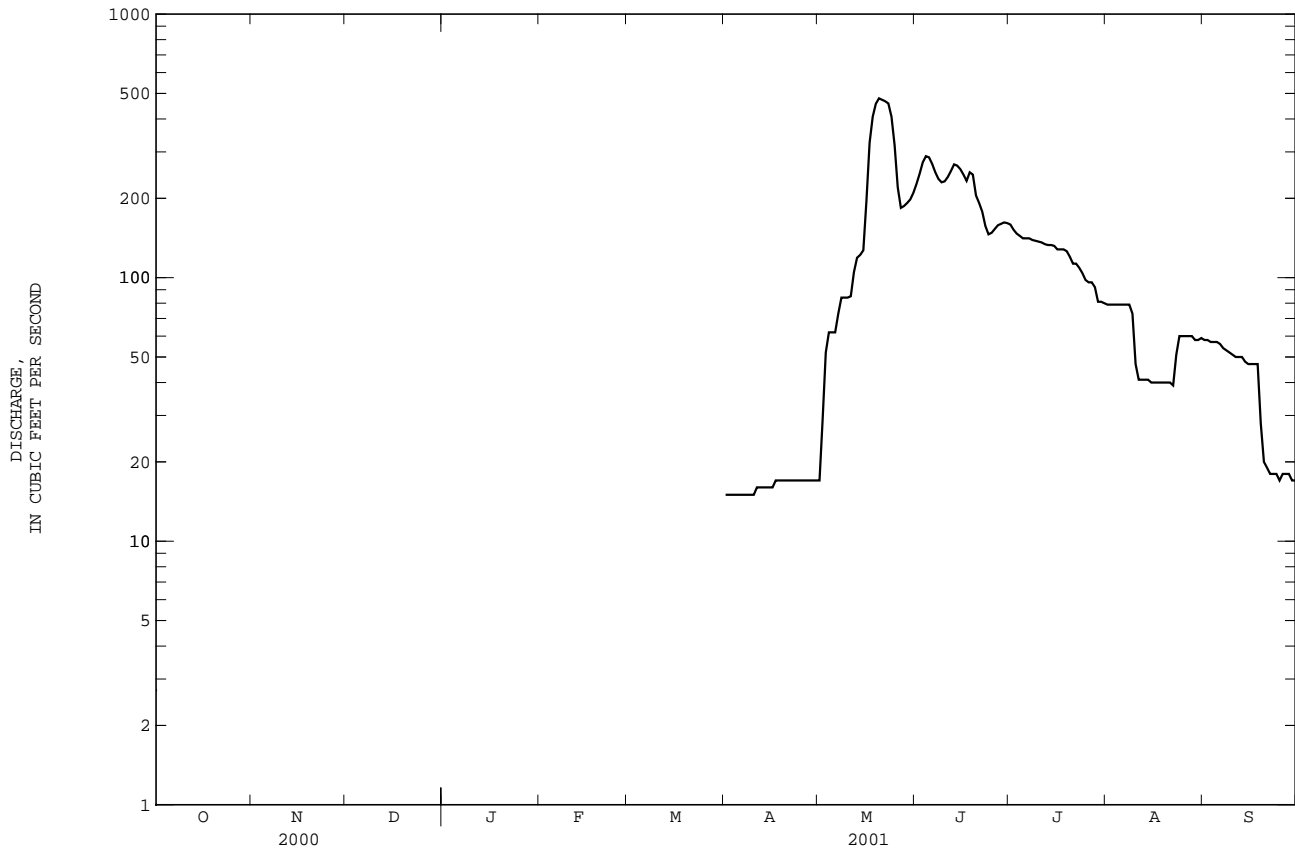
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1911 - 2001\*

ANNUAL MEAN	--		197	
HIGHEST ANNUAL MEAN	--		211	1917
LOWEST ANNUAL MEAN	--		183	1912
HIGHEST DAILY MEAN	479	May 20	2330	Jun 17 1918
LOWEST DAILY MEAN	15	Apr 1-10	9.6	Apr 23 1990
MAXIMUM PEAK FLOW	479	May 19	2330	Jun 17 1918
MAXIMUM PEAK STAGE	2.79	May 19	2.79	May 19 2001
ANNUAL RUNOFF (AC-FT)	--		143000	

\* For period of operation.



09205000 NEW FORK RIVER NEAR BIG PINEY, WY

LOCATION.--Lat 42°34'02", long 109°55'46", in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.22, T.30 N., R.110 W., Sublette County, Hydrologic Unit 14040102, on right bank 350 ft downstream from old highway bridge, 3.4 mi upstream from mouth, and 9.5 mi northeast of Big Piney.

DRAINAGE AREA.--1,230 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,800 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, power development, and diversions for irrigation of about 62,100 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294	315	e204	e188	e192	e201	386	269	1210	589	307	219
2	290	311	e198	e181	e190	e209	390	282	1130	570	317	223
3	287	e286	e201	e188	e191	e218	397	307	1120	567	317	219
4	271	e285	e207	e186	e188	e213	368	336	1140	543	317	219
5	272	291	e206	e188	e190	e213	354	335	1120	537	313	217
6	286	279	e208	e184	e191	e221	361	300	1010	554	303	223
7	290	e270	e210	e173	e187	e223	364	302	877	565	294	231
8	290	e257	e204	e172	e179	e221	364	302	765	570	290	231
9	290	e263	e213	e174	e177	e227	348	336	677	573	279	231
10	292	e270	e212	e188	e187	e232	322	401	632	587	279	227
11	314	249	e198	e182	e193	e241	313	561	609	629	275	223
12	343	197	e200	e185	e197	e236	311	722	620	625	275	216
13	336	190	e202	e185	e198	e236	299	938	866	582	265	215
14	333	e196	e207	e182	e197	e237	289	1210	1030	570	255	224
15	333	e209	e210	e177	e195	e231	277	1560	945	572	255	227
16	332	e206	e201	e167	e202	e235	268	1810	842	601	261	227
17	322	e203	e198	e168	e201	e245	272	2430	781	574	248	219
18	321	e203	e205	e171	e208	e257	287	2800	720	508	236	239
19	312	e207	e202	e182	e214	e277	294	2600	677	483	231	239
20	311	e210	e203	e187	e220	e299	280	2290	652	463	229	228
21	311	e215	e195	e183	e211	e336	273	2140	610	432	262	227
22	311	e216	e205	e186	e213	e333	264	1800	582	408	255	215
23	311	e212	e205	e186	e222	e345	255	1490	555	398	240	211
24	311	e204	e198	e182	e221	e351	262	1370	553	394	232	211
25	311	e205	e190	e185	e215	e350	265	1420	556	386	238	211
26	311	e209	e193	e180	e212	e342	256	1530	562	378	237	204
27	311	e212	e193	e181	e207	e317	245	1590	580	396	231	201
28	311	e204	e191	e186	e199	e311	245	1690	605	380	231	199
29	311	e200	e184	e183	---	e325	245	1680	602	363	226	199
30	311	e205	e191	e180	---	e331	251	1520	597	341	221	193
31	314	---	e189	e185	---	e321	---	1370	---	317	219	---
TOTAL	9543	6979	6223	5625	5597	8334	9105	37691	23225	15455	8138	6568
MEAN	308	233	201	181	200	269	304	1216	774	499	263	219
MAX	343	315	213	188	222	351	397	2800	1210	629	317	239
MIN	271	190	184	167	177	201	245	269	553	317	219	193
AC-FT	18930	13840	12340	11160	11100	16530	18060	74760	46070	30650	16140	13030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)

	MEAN	377	323	241	201	212	269	434	1152	3009	1639	587	374
	MAX	989	608	397	277	337	597	1114	2539	7065	4155	1279	766
	(WY)	1983	1984	1983	1969	1969	1972	1969	1969	1986	1982	1982	1983
	MIN	171	188	139	129	135	161	181	254	699	405	225	164
	(WY)	1989	1989	1989	1963	1989	1977	1981	1977	1992	1961	1988	1988



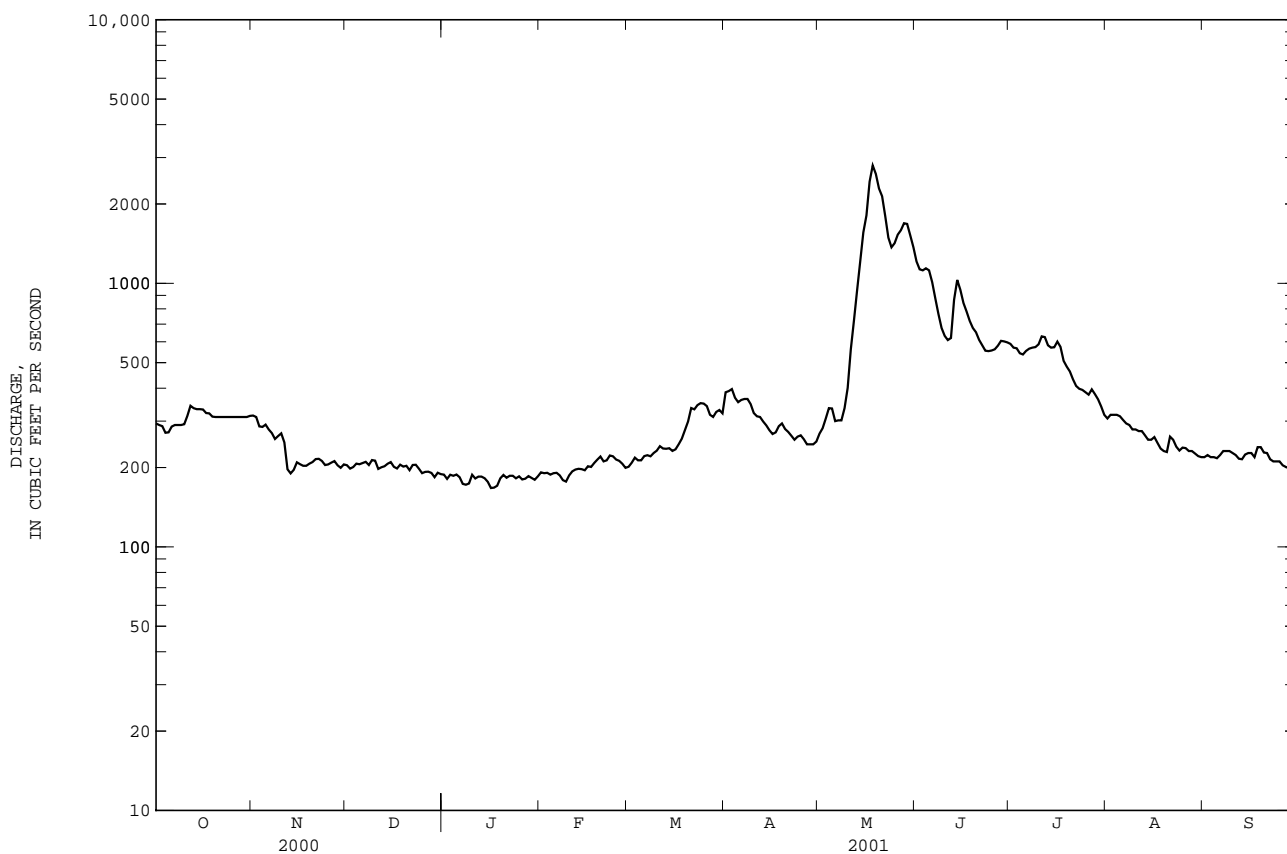
09205000 NEW FORK RIVER NEAR BIG PINEY, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1954 - 2001	
ANNUAL TOTAL	191056		142483		--	
ANNUAL MEAN	522		390		736	
HIGHEST ANNUAL MEAN	--		--		1288	1986
LOWEST ANNUAL MEAN	--		--		313	1977
HIGHEST DAILY MEAN	3460	May 30	2800	May 18	9110	Jun 7 1986
LOWEST DAILY MEAN	170	Feb 19	167	Jan 16	90	Jan 13 1963
ANNUAL SEVEN-DAY MINIMUM	181	Feb 14	176	Jan 13	104	Jan 9 1963
MAXIMUM PEAK FLOW	--		2860 <sup>a</sup>	May 18	9190	Jun 7 1986
MAXIMUM PEAK STAGE	--		5.66 <sup>b</sup>	Dec 30	8.28	Jun 7 1986
ANNUAL RUNOFF (AC-FT)	379000		282600		532900	
10 PERCENT EXCEEDS	1000		662		1840	
50 PERCENT EXCEEDS	290		262		330	
90 PERCENT EXCEEDS	191		188		190	

a Gage height, 4.64 ft.

b Backwater from ice.

e Estimated.



## GREEN RIVER BASIN

09209400 GREEN RIVER NEAR LA BARGE, WY

LOCATION.--Lat 42°11'34", long 110°09'45", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.33, T.26 N., R.112 W., Lincoln County, Hydrologic Unit 14040101, on right bank 1.7 mi upstream from high-water line of Fontenelle Reservoir at elevation 6,513 ft, 4.0 mi upstream from Muddy Creek, and 5.0 mi south of La Barge.

DRAINAGE AREA.--3,910 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. Records are equivalent to those published August 1946 to March 1965 as Green River near Fontenelle (station 09209500) average annual mean 1,557 cfs.

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 198,000 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	570	699	e420	e400	e390	e610	e740	882	2060	1190	524	300
2	559	694	e410	e400	e390	e620	e720	855	1910	1120	526	319
3	543	642	e400	e390	e400	e630	e700	928	1850	1030	529	332
4	545	627	e410	e400	e410	e640	e690	822	1930	960	522	340
5	545	636	e420	e400	e420	e660	e680	700	2030	895	518	335
6	551	665	e430	e400	e430	e680	e690	552	1910	866	526	325
7	563	614	e420	e400	e420	e700	e700	506	1630	882	517	334
8	564	639	e420	e390	e410	e720	e700	518	1350	910	509	351
9	570	630	e410	e390	e390	e750	e700	479	1150	944	545	389
10	576	623	e390	e390	e400	e770	e690	520	1010	994	541	405
11	625	566	e400	e400	e410	e770	682	655	961	1050	492	396
12	682	597	e400	e390	e430	e770	675	788	987	1190	492	382
13	712	490	e410	e390	e440	e760	670	979	1340	1130	505	352
14	697	479	e390	e380	e450	e750	642	1310	1880	1030	476	340
15	692	e475	e370	e360	e470	e750	611	1690	1850	967	472	358
16	697	e460	e360	e340	e490	e750	591	2170	1570	1030	465	362
17	679	e465	e370	e350	e510	e775	611	3140	1330	1070	439	360
18	670	e470	e380	e360	e530	e800	634	4370	1160	991	412	365
19	654	e480	e390	e380	e550	e825	712	4120	1040	903	383	397
20	646	e480	e400	e390	e570	e850	836	3410	968	826	370	394
21	646	e485	e400	e390	e600	e840	862	3030	906	786	398	379
22	648	e485	e400	e380	e620	e830	804	2710	842	743	450	370
23	657	e485	e390	e390	e640	e832	711	2230	769	686	439	355
24	657	e490	e400	e400	e620	e820	676	1930	749	665	418	344
25	657	e490	e400	e400	e600	e820	692	1840	816	663	404	346
26	662	e490	e400	e400	e600	e810	715	1960	929	691	370	326
27	668	e490	e395	e390	e580	e800	746	2160	1100	666	358	314
28	668	e490	e395	e390	e600	e800	806	2380	1250	663	344	312
29	668	e470	e395	e400	---	e790	847	2590	1300	626	334	311
30	668	e450	e390	e410	---	e780	907	2560	1240	607	314	316
31	677	---	e400	e400	---	e760	---	2310	---	562	299	---
TOTAL	19616	16256	12365	12050	13770	23462	21440	55094	39817	27336	13891	10509
MEAN	633	542	399	389	492	757	715	1777	1327	882	448	350
MAX	712	699	430	410	640	850	907	4370	2060	1190	545	405
MIN	543	450	360	340	390	610	591	479	749	562	299	300
AC-FT	38910	32240	24530	23900	27310	46540	42530	109300	78980	54220	27550	20840

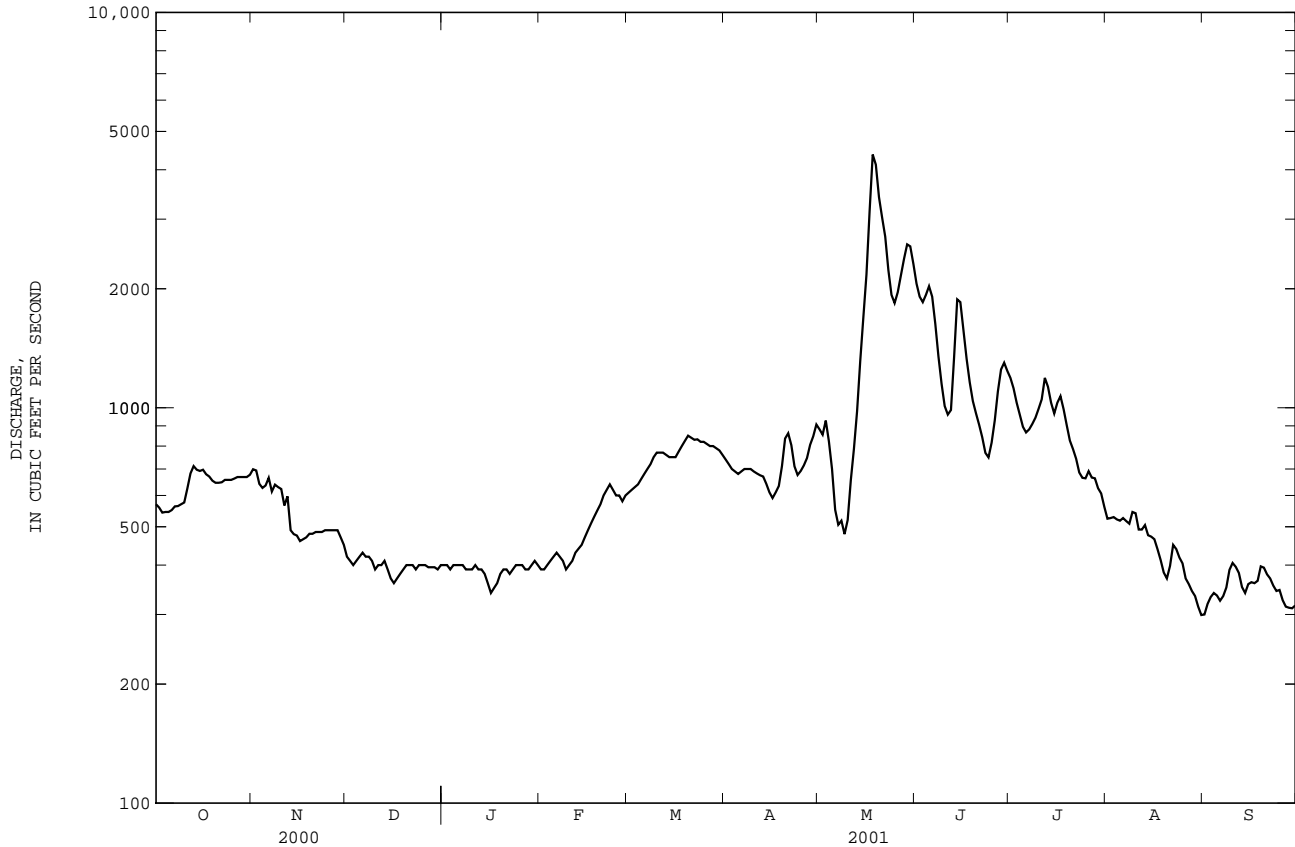
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	MEAN	834	736	534	464	497	715	1397	2886	5757	3464	1465	886
MAX	2049	1306	866	608	681	1565	2692	5357	14230	7993	3185	1768	
(WY)	1983	1984	1984	1966	1998	1972	1986	1997	1986	1982	1982	1983	
MIN	368	469	367	314	270	426	469	305	1080	710	448	350	
(WY)	1989	1989	1989	1989	1989	1970	1977	1977	1992	1994	2001	2001	

09209400 GREEN RIVER NEAR LA BARGE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1964 - 2001	
ANNUAL TOTAL	379918		265606		--	
ANNUAL MEAN	1038		728		1639	
HIGHEST ANNUAL MEAN	--		--		2908	1986
LOWEST ANNUAL MEAN	--		--		668	1977
HIGHEST DAILY MEAN	5330	May 27	4370	May 18	18800	Jun 9 1986
LOWEST DAILY MEAN	300	Feb 19	299	Aug 31	188	May 17 1977
ANNUAL SEVEN-DAY MINIMUM	324	Feb 14	320	Aug 29	215	May 13 1977
MAXIMUM PEAK FLOW	--		4500	May 18	18800	Jun 9 1986
MAXIMUM PEAK STAGE	--		7.12	May 18	10.50	Jun 9 1986
ANNUAL RUNOFF (AC-FT)	753600		526800		1187000	
10 PERCENT EXCEEDS	2240		1170		4040	
50 PERCENT EXCEEDS	636		600		800	
90 PERCENT EXCEEDS	380		370		430	

e Estimated.



## GREEN RIVER BASIN

09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY

LOCATION.--Lat 42°05'46", long 110°24'57", in NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.2, T.24 N., R.115 W., Lincoln County, Hydrologic Unit 14040101, on left bank 2.0 mi downstream from Dutch George Creek and 14 mi west of Fontenelle.

DRAINAGE AREA.--152 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1951 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,950 ft above sea level, from topographic map. Prior to May 5, 1970, at site 300 ft downstream at present datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 780 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	e29	e22	e24	e24	e22	50	97	44	26	13	15
2	25	e27	e23	e24	e24	e20	55	122	39	25	13	16
3	25	e24	e24	e23	e25	19	50	151	40	25	12	14
4	25	e22	e25	e24	e26	e20	42	e155	41	24	15	14
5	25	e21	e25	e25	e29	e20	46	e125	41	24	16	14
6	25	e19	e25	e27	e27	e22	49	e100	38	24	14	16
7	25	e20	e24	e25	e25	e22	47	e86	36	25	14	17
8	25	e21	e25	e25	e23	e22	45	e68	35	29	14	18
9	25	e20	e25	e26	e21	e21	39	69	34	29	13	18
10	26	e19	e24	e27	e22	21	34	76	33	29	13	17
11	36	e18	e22	e26	e23	21	34	79	31	28	14	16
12	34	e17	e21	e25	e24	23	35	85	35	27	14	16
13	30	e18	e23	e25	e24	21	35	94	48	29	14	17
14	31	e19	e25	e25	e23	e22	34	95	46	30	14	18
15	31	e21	e26	e24	e22	e22	34	103	44	29	14	17
16	29	e20	e25	e23	e23	22	36	140	40	29	14	17
17	28	e19	e26	e24	e23	e21	41	130	39	26	14	17
18	28	e18	e26	e25	e24	22	49	108	37	23	14	19
19	27	e18	e25	e26	25	24	57	90	36	22	13	18
20	27	e19	e24	e27	e22	29	54	81	33	21	13	17
21	27	e19	e24	e29	e21	56	47	76	33	18	15	16
22	28	e19	e25	e31	21	107	43	70	31	17	16	16
23	29	e19	e26	e29	e21	90	40	66	30	17	16	16
24	28	e19	e25	e28	e22	92	42	66	30	16	15	16
25	28	e19	e24	e28	e23	92	46	66	30	16	14	15
26	28	e19	e24	e27	23	84	54	61	29	16	13	15
27	28	e20	e24	e27	e23	64	64	59	30	16	13	16
28	28	e19	e25	e26	e22	53	70	57	28	16	12	16
29	27	e20	e26	e25	---	53	79	58	28	15	12	16
30	28	e21	e25	e24	---	57	88	51	26	14	12	16
31	e29	---	e24	e23	---	55	---	49	---	13	13	---
TOTAL	860	603	757	797	655	1239	1439	2733	1065	698	426	489
MEAN	27.7	20.1	24.4	25.7	23.4	40.0	48.0	88.2	35.5	22.5	13.7	16.3
MAX	36	29	26	31	29	107	88	155	48	30	16	19
MIN	25	17	21	23	21	19	34	49	26	13	12	14
AC-FT	1710	1200	1500	1580	1300	2460	2850	5420	2110	1380	845	970

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2001, BY WATER YEAR (WY)

	MEAN	32.4	30.1	26.3	25.8	26.8	33.0	99.4	215	227	77.2	37.7	30.9
MAX	55.3	47.1	42.1	41.3	51.3	76.3	280	437	628	185	76.0	63.1	
(WY)	1987	1998	1985	1985	1985	1986	1986	1980	1986	1975	1983	1997	
MIN	19.1	18.6	13.5	14.3	15.0	18.7	35.1	32.1	20.3	17.2	10.2	12.7	
(WY)	1978	1994	1990	1991	1958	1962	1977	1977	1977	1977	1992	1977	

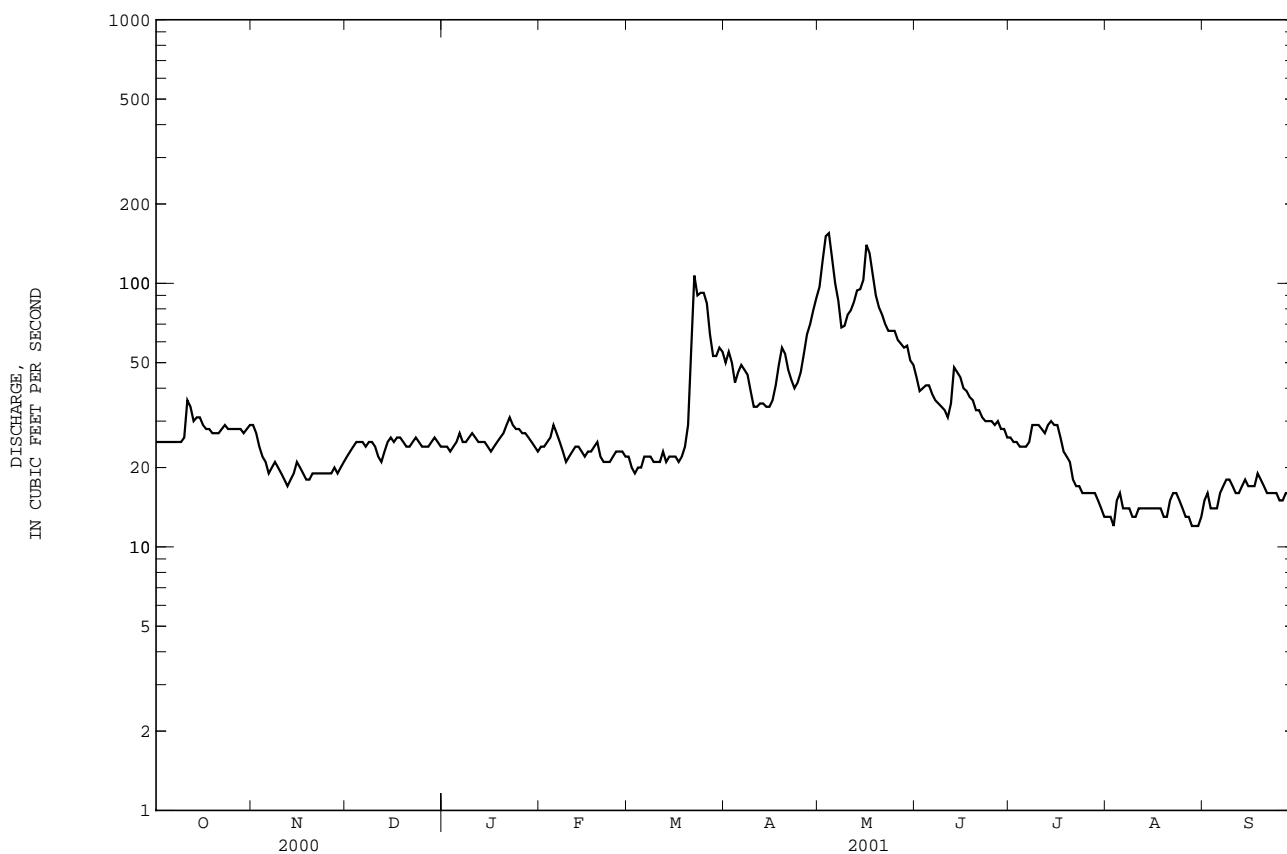
09210500 FONTENELLE CREEK NEAR HERSCHLER RANCH, NEAR FONTENELLE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1952 - 2001	
ANNUAL TOTAL	16951		11761		--	
ANNUAL MEAN	46.3		32.2		71.9	
HIGHEST ANNUAL MEAN	--		--		155	
LOWEST ANNUAL MEAN	--		--		24.8	
HIGHEST DAILY MEAN	210	May 26	155	May 4	865	Jun 6 1986
LOWEST DAILY MEAN	17	Nov 12	12	Aug 3	5.6	Aug 14 1992
ANNUAL SEVEN-DAY MINIMUM	19	Nov 17	13	Aug 25	6.2	Aug 10 1992
MAXIMUM PEAK FLOW	--		168 <sup>a</sup>		907	
MAXIMUM PEAK STAGE	--		6.54 <sup>b</sup>		9.51	
ANNUAL RUNOFF (AC-FT)	33620		23330		52070	
10 PERCENT EXCEEDS	106		60		183	
50 PERCENT EXCEEDS	29		25		33	
90 PERCENT EXCEEDS	20		15		20	

a Gage height, 6.42 ft.

b Backwater from ice.

e Estimated.



## GREEN RIVER BASIN

09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY

LOCATION.--Lat 42°01'16", long 110°02'57", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.31, T.24 N., R.111 W., Sweetwater County, Hydrologic Unit 14040103, on right bank 1.0 mi downstream from Fontenelle Dam, 2.5 mi upstream from Slate Creek, and 6.0 mi southeast of Fontenelle.

DRAINAGE AREA.--4,280 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1963 to current year.

REVISED RECORDS.--WSP 2125: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,378.13 ft above sea level.

REMARKS.--Records good. Flow completely regulated by Fontenelle Reservoir (station 09211150) 1.0 mi upstream. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 202,000 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	924	931	898	915	917	555	577	1410	825	693	749	598
2	931	926	896	916	917	562	609	1430	829	751	646	589
3	931	915	907	915	933	561	612	1440	832	706	612	576
4	931	909	913	913	1000	554	627	1370	839	697	619	599
5	944	885	907	906	987	551	641	1380	850	709	616	596
6	967	936	891	910	940	575	645	1390	817	716	604	591
7	968	936	882	911	924	586	640	1350	729	715	606	586
8	965	950	887	911	932	595	558	1290	683	704	600	572
9	967	951	882	910	927	595	540	1290	685	702	605	570
10	969	951	891	911	929	575	547	1260	685	707	604	564
11	961	797	894	919	938	591	534	1020	681	703	589	573
12	956	553	893	930	935	570	503	952	690	700	595	569
13	953	722	885	946	939	563	491	967	695	691	595	567
14	943	817	888	937	936	563	492	954	701	686	595	614
15	937	839	885	941	912	555	495	842	715	690	595	580
16	921	902	891	944	909	569	496	854	713	688	599	574
17	917	867	905	944	905	558	501	893	695	693	605	577
18	912	864	904	949	913	547	502	882	704	682	611	606
19	912	873	912	951	900	550	499	866	721	689	613	594
20	925	873	912	937	901	551	649	840	709	699	605	588
21	926	865	913	940	893	546	809	860	707	707	624	589
22	921	892	921	941	887	549	874	881	695	703	635	574
23	921	892	920	936	857	534	956	871	708	705	630	588
24	922	882	906	941	819	539	959	877	705	706	608	579
25	921	882	897	938	766	550	1120	877	729	713	602	571
26	924	892	892	931	711	546	1320	884	726	719	604	549
27	933	894	892	931	661	532	1330	898	726	738	604	525
28	943	887	892	926	603	537	1360	901	695	741	602	500
29	951	887	886	932	---	555	1390	896	686	747	601	488
30	944	896	899	924	---	568	1410	890	701	733	599	506
31	931	---	911	921	---	568	---	896	---	757	599	---
TOTAL	29071	26266	27852	28777	24791	17350	22686	32411	21876	21990	18971	17152
MEAN	938	876	898	928	885	560	756	1046	729	709	612	572
MAX	969	951	921	951	1000	595	1410	1440	850	757	749	614
MIN	912	553	882	906	603	532	491	840	681	682	589	488
AC-FT	57660	52100	55240	57080	49170	34410	45000	64290	43390	43620	37630	34020

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

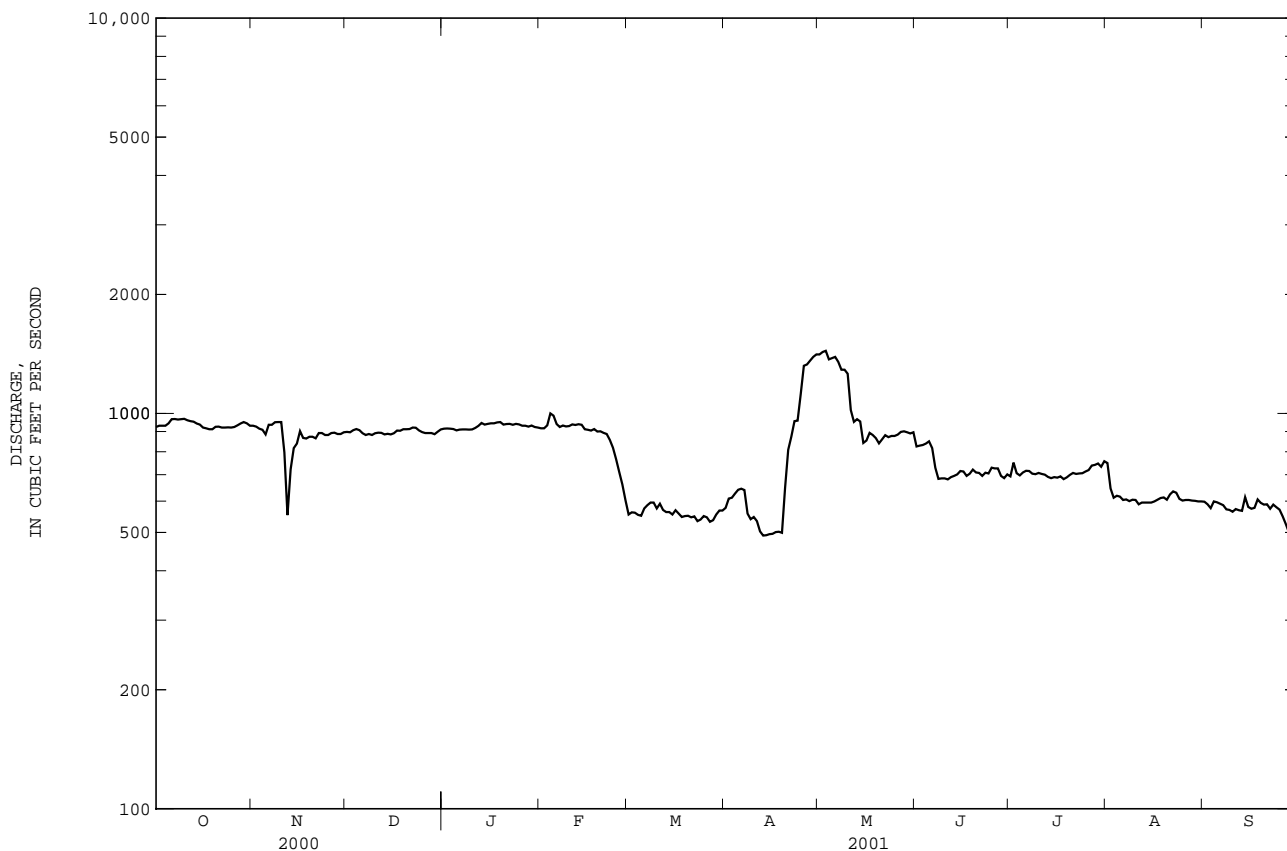
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	1024	897	831	844	893	955	1480	2421	4508	3230	1620	1224
MAX	3138	1522	1308	1312	1818	1576	3134	5588	11240	8868	3466	7893
(WY)	1983	1984	1998	1998	1974	1986	1986	1985	1986	1986	1982	1965
MIN	291	308	272	273	262	365	370	463	465	364	367	285
(WY)	1989	1989	1968	1968	1968	1989	1968	1992	1977	1977	1977	1988

## 09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1964 - 2001	
ANNUAL TOTAL	420502		289193		--	
ANNUAL MEAN	1149		792		1664	
HIGHEST ANNUAL MEAN	--		--		3060	1986
LOWEST ANNUAL MEAN	--		--		690	1977
HIGHEST DAILY MEAN	1720	Jun 9	1440	May 3	18600	Sep 6 1965
LOWEST DAILY MEAN	553	Nov 12	488	Sep 29	209	Nov 22 1968
ANNUAL SEVEN-DAY MINIMUM	785	Nov 11	497	Apr 13	251	Dec 25 1967
MAXIMUM PEAK FLOW	--		1450	May 2	19400 <sup>a</sup>	Sep 5 1965
MAXIMUM PEAK STAGE	--		11.78	May 2	18.74 <sup>b</sup>	Sep 5 1965
ANNUAL RUNOFF (AC-FT)	834100		573600		1205000	
10 PERCENT EXCEEDS	1490		950		3610	
50 PERCENT EXCEEDS	1170		839		1120	
90 PERCENT EXCEEDS	888		562		507	

a Caused by emergency released from Fontenelle Reservoir.

b From floodmarks.



## 09211200 GREEN RIVER BELOW FONTENELLE RESERVOIR, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1967 to September 1976.

WATER TEMPERATURES: October 1967 to September 1976.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED SATUR- ATION (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT (PER- CENT AT- TION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 03...	1145	928	605	9.6	115	8.6	348	15.0	13.0	140	38.7	10.8	1.46
NOV 15...	1545	835	598	11.2	108	8.7	356	-3.0	3.5	150	41.1	11.7	1.46
JAN 16...	1255	961	604	11.6	108	8.6	436	-8.0	2.5	--	--	--	--
MAR 28...	1130	527	600	--	--	8.1	470	7.0	4.0	--	--	--	--
MAY 07...	1510	1360	610	9.1	99	8.3	442	16.0	9.0	--	--	--	--
JUN 19...	1405	728	--	--	--	8.4	326	25.5	15.0	--	--	--	--
JUL 11...	1410	709	--	--	--	8.2	338	25.5	16.0	--	--	--	--
AUG 16...	1040	593	612	9.0	119	8.2	334	22.5	18.0	--	--	--	--
SEP 12...	1400	581	610	8.5	113	8.8	393	28.0	18.0	--	--	--	--

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA- LINITY WAT.DIS FET LAB (MG/L AS CACO3) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 03...	.6	16.7	124	--	3.1	.2	3.7	51.1	.27	501	--	200	<.020
NOV 15...	.6	18.0	--	134	3.1	.2	4.1	55.7	.29	486	--	215	<.041
JAN 16...	--	--	--	--	--	--	--	--	--	--	282	--	<.041
MAR 28...	--	--	--	--	--	--	--	--	--	--	290	--	<.041
MAY 07...	--	--	--	--	--	--	--	--	--	--	276	--	<.041
JUN 19...	--	--	--	--	--	--	--	--	--	--	216	--	<.040
JUL 11...	--	--	--	--	--	--	--	--	--	--	208	--	<.040
AUG 16...	--	--	--	--	--	--	--	--	--	--	196	--	E.035
SEP 12...	--	--	--	--	--	--	--	--	--	--	242	--	E.022

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 03...	.23	<.050	<.010	<.050	<.010	<.050
NOV 15...	.18	E.029	<.006	<.060	<.018	<.060
JAN 16...	.18	<.047	<.006	<.060	<.018	<.060
MAR 28...	.16	<.047	<.006	<.060	<.018	<.060
MAY 07...	.19	<.047	<.006	<.060	<.018	<.060
JUN 19...	.26	<.050	<.006	<.060	<.020	E.038
JUL 11...	.31	E.031	E.005	<.060	<.020	<.060
AUG 16...	.21	.059	<.006	E.031	.024	E.031
SEP 12...	.31	E.036	E.005	<.060	E.009	<.060

E -- Estimated value.



09213500 BIG SANDY RIVER NEAR FARSON, WY

LOCATION.--Lat 42°19'01", long 109°29'06", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.17, T.27 N., R.106 W., Sublette County, Hydrologic Unit 14040104, on left upstream side of Eden Canal diversion, about 1.0 mi upstream from high-water line of Big Sandy Reservoir, 14.5 mi north of Farson, and 24.5 mi upstream from Little Sandy Creek.

DRAINAGE AREA.--322 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1914 to September 1917, October 1920 to October 1924, October 1926 to September 1934, April 1953 to current year (no winter records since 1971). Prior to October 1968, published as Big Sandy Creek near Farson. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 1733: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,770 ft above sea level, from topographic map. Prior to Apr. 28, 1921, nonrecording gage, and Apr. 28, 1921, to Aug. 3, 1934, water-stage recorder at site 0.5 mi upstream at different datum. Apr. 17, 1953, to Nov. 11, 1954, water-stage recorder at site 1.5 mi upstream at different datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diversions for irrigation of about 1,000 acre upstream from station. The Eden Canal, which bypasses the station, has not been used since station was established at present site in November 1954. National Weather Service data collection platform with satellite telemetry at station. Result of discharge measurement, in cubic feet per second, made during the period when station was not in operation, is given below:

Oct. 6 . . . . 19.6

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e47	132	201	75	11	6.1
2	---	---	---	---	---	---	e50	143	203	69	9.5	5.9
3	---	---	---	---	---	---	e43	156	214	62	9.0	6.4
4	---	---	---	---	---	---	e35	125	251	56	9.5	6.3
5	---	---	---	---	---	---	e37	96	205	52	8.6	6.4
6	---	---	---	---	---	---	e38	103	168	48	7.7	6.9
7	---	---	---	---	---	---	e38	123	139	48	8.0	13
8	---	---	---	---	---	---	e33	122	126	47	8.6	13
9	---	---	---	---	---	---	e26	137	125	53	12	14
10	---	---	---	---	---	---	e21	191	126	50	11	13
11	---	---	---	---	---	---	e21	250	137	49	11	12
12	---	---	---	---	---	---	e22	280	142	55	14	11
13	---	---	---	---	---	---	e22	320	145	49	14	12
14	---	---	---	---	---	---	e21	376	174	45	11	12
15	---	---	---	---	---	---	e21	413	153	43	9.3	14
16	---	---	---	---	---	---	20	417	132	42	9.9	15
17	---	---	---	---	---	---	22	483	113	42	13	15
18	---	---	---	---	---	---	29	386	97	43	12	14
19	---	---	---	---	---	---	72	322	91	36	9.9	13
20	---	---	---	---	---	---	83	253	83	30	9.8	17
21	---	---	---	---	---	---	60	278	80	27	12	16
22	---	---	---	---	---	---	49	197	78	25	11	11
23	---	---	---	---	---	---	41	176	78	21	12	9.9
24	---	---	---	---	---	---	38	201	79	20	15	9.3
25	---	---	---	---	---	---	37	264	84	20	11	8.7
26	---	---	---	---	---	---	44	299	89	20	9.4	8.7
27	---	---	---	---	---	---	53	299	92	21	8.3	12
28	---	---	---	---	---	---	73	306	89	20	7.7	14
29	---	---	---	---	---	---	89	296	87	19	7.4	13
30	---	---	---	---	---	---	103	240	81	18	6.8	11
31	---	---	---	---	---	---	---	224	---	14	6.2	---
TOTAL	---	---	---	---	---	---	1288	7608	3862	1219	315.6	339.6
MEAN	---	---	---	---	---	---	42.9	245	129	39.3	10.2	11.3
MAX	---	---	---	---	---	---	103	483	251	75	15	17
MIN	---	---	---	---	---	---	20	96	78	14	6.2	5.9
AC-FT	---	---	---	---	---	---	2550	15090	7660	2420	626	674

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2001, BY WATER YEAR (WY)\*

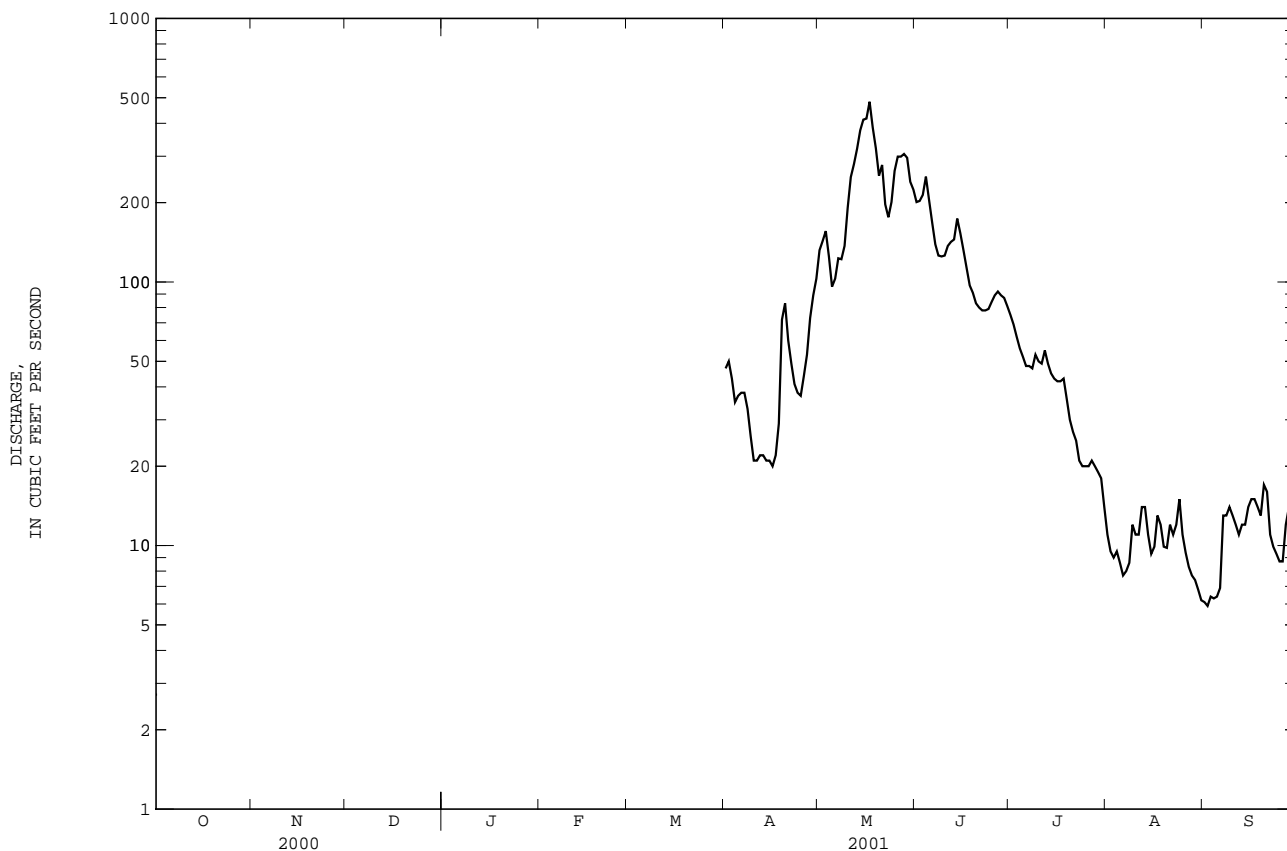
MEAN	30.2	21.2	13.2	11.1	12.1	21.8	60.1	238	419	176	49.3	30.6
MAX	75.6	41.0	21.7	22.9	26.0	46.7	148	454	905	510	155	83.9
(WY)	1928	1934	1969	1969	1969	1967	1983	1928	1986	1995	1930	1927
MIN	8.90	9.17	3.00	.30	.10	2.98	22.1	89.1	55.5	14.3	8.48	2.07
(WY)	1932	1961	1960	1960	1960	1961	1975	1933	1934	1934	1931	1931

## GREEN RIVER BASIN

09213500 BIG SANDY RIVER NEAR FARSON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR*		FOR 2001 WATER YEAR*		WATER YEARS 1915 - 2001*	
ANNUAL MEAN	--	--	--	--	86.7	
HIGHEST ANNUAL MEAN	--	--	--	--	148	1917
LOWEST ANNUAL MEAN	--	--	--	--	33.0	1934
HIGHEST DAILY MEAN	629	May 30	483	May 17	1690	Jun 4 1986
LOWEST DAILY MEAN	12	Aug 11	5.9	Sep 2	.00	Jan 27 1963
ANNUAL SEVEN-DAY MINIMUM	13	Aug 10	6.3	Aug 30	.10	Feb 1 1960
MAXIMUM PEAK FLOW	--	--	550	May 17	1890	Jun 3 1986
MAXIMUM PEAK STAGE	--	--	6.49	May 17	8.46	Jun 3 1986
ANNUAL RUNOFF (AC-FT)	--	--	--	--	62800	
10 PERCENT EXCEEDS	--	--	234	--	349	
50 PERCENT EXCEEDS	--	--	41	--	38	
90 PERCENT EXCEEDS	--	--	9.1	--	10	

\* For period of operation.  
e Estimated.



## 09213700 BIG SANDY RESERVOIR NEAR FARSON, WY

LOCATION.--Lat 42°14'57", long 109°25'43", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.11, T.26 N., R.106 W., Sweetwater County, Hydrologic Unit 14040104, 10.1 mi north of Farson and 20.5 mi upstream from Little Sandy Creek.

DRAINAGE AREA.--386 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1987 to current year.

REVISED. --WDR WY-98-1: 1996, 1997.

GAGE.--Water-stage recorder. Datum of gage is 6,770.00 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except those for estimated contents, which are poor. Reservoir is formed by an earthfill dam, storage began in April 1953. Total capacity, 54,385 acre-ft at elevation 6,762.8 ft, crest of spillway, including 1,425 acre-ft of dead storage in a permanent pool at elevation 6,720.0 ft, trash-rack sill. Reservoir is used for storage of irrigation water and for recreation. Figures given herein represent active storage. U.S. Geological Survey data collection platform with satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents recorded, 41,400 acre-ft, June 12, 1997, elevation, 6,758.71 ft, June 12, 1997; minimum contents recorded, 322 acre-ft, Sept. 15, 2000, elevation, 6,721.85 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 22,500 acre-ft, May 30, maximum daily elevation 6,750.18 ft; minimum daily contents, 358 acre-ft, Aug. 16, minimum daily elevation 6722.04 ft.

Capacity table (elevation, in feet,  
and contents, in acre-feet)

6,720	0	6,740	8,655	6,760	44,905
6,730	2,545	6,750	22,155		

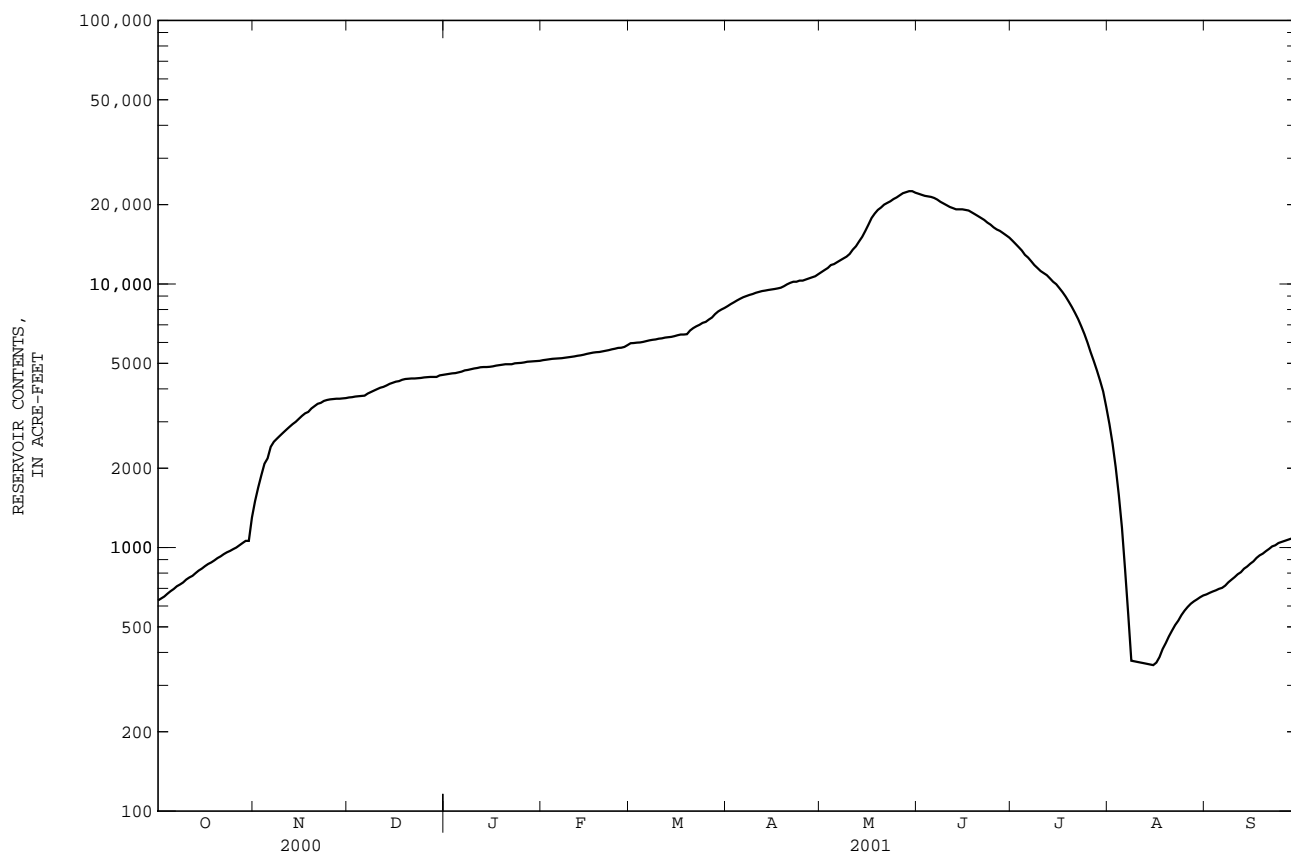
RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e630	e1500	e3710	e4540	e5140	5960	8240	11100	22000	14600	2940	664
2	e641	e1690	e3720	e4560	e5160	e5970	8390	11300	21800	14200	2480	673
3	e652	e1880	e3740	e4580	e5180	e5990	8520	11500	21600	13800	2020	681
4	e668	e2080	e3750	e4590	e5200	e6000	8660	11800	21500	13400	1580	688
5	e683	e2180	e3760	4620	e5210	e6030	8790	11900	21400	12900	1190	697
6	e696	2410	3770	e4650	e5220	e6070	8910	12100	21200	12600	826	703
7	e713	e2520	e3840	e4700	e5230	e6110	9000	12300	20900	12200	559	717
8	e724	e2590	e3890	e4720	5250	e6140	9090	12500	20500	11800	372	738
9	e737	e2660	e3940	4750	e5270	e6160	9160	12700	20200	11500	370	755
10	e756	e2730	e3990	e4780	e5290	e6200	9260	13000	19900	11200	368	772
11	e770	e2800	e4040	e4800	e5310	e6220	9330	13500	19600	11000	366	792
12	e781	e2870	e4070	e4830	5340	6260	9400	13900	19400	10800	364	806
13	e800	e2940	4120	e4840	e5360	e6280	9440	14500	19200	10500	362	831
14	e818	e3000	e4180	e4840	e5390	e6300	9490	15100	19200	10200	360	847
15	e832	e3080	e4220	e4850	e5430	e6340	9530	15900	19200	9980	358	868
16	e850	e3160	e4260	e4870	e5460	e6390	9570	16800	19100	9650	366	886
17	e866	e3230	e4280	e4900	e5490	e6430	9620	17800	19000	9320	384	913
18	e878	e3270	4330	e4920	e5510	e6430	9680	18500	18700	8960	412	934
19	e894	3370	e4360	e4940	5520	6450	9810	19100	18400	8570	434	948
20	e912	e3440	e4370	e4960	e5550	e6660	9970	19500	18100	8180	460	969
21	e926	e3510	e4380	e4960	5580	e6800	10100	20000	17800	7770	484	988
22	e944	e3540	e4380	4960	e5610	e6910	10200	20300	17500	7360	508	1010
23	e959	3600	e4390	5000	e5650	e7000	10200	20600	17100	6910	528	1020
24	e971	e3630	e4400	e5010	e5680	e7120	10300	21000	16800	6460	554	1040
25	e986	e3650	e4420	e5020	e5720	e7180	10300	21300	16400	5990	576	1050
26	e1000	e3660	e4430	5040	e5730	7330	10400	21700	16100	5510	595	1060
27	e1020	e3670	4440	e5070	5770	e7460	10500	22100	15900	5100	612	1070
28	e1040	e3670	4440	e5080	e5860	7690	10600	22300	15600	4700	625	1080
29	e1060	e3680	4440	5090	---	7870	10700	22500	15300	4300	636	1090
30	1060	e3690	e4500	e5100	---	8000	10900	22500	15000	3910	648	1100
31	e1300	---	e4520	e5110	---	8110	---	22200	---	3410	658	---
MAX	1300	3690	4520	5110	5860	8110	10900	22500	22000	14600	2940	1100
MIN	630	1500	3710	4540	5140	5960	8240	11100	15000	3410	358	664
(#)	--	--	--	--	--	6739.4	6742.3	6750.0	6745.6	6732.1	6723.5	6725.4
(*)	+683	+2390	+830	+590	+750	+2250	+2790	+11300	-7200	-11590	-2752	+442

CAL YR 2000 MAX 36000 MIN 322  
WTR YR 2001 MAX 19500 MIN 386

(#) Elevation, in feet, at end of month.  
(\*) Change in contents, in acre-feet.  
e Estimated.

09213700 BIG SANDY RESERVOIR NEAR FARSON, WY--Continued



## 09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY

LOCATION.--Lat 41°56'51", long 109°41'15", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.29, T.23 N., R.108 W., Sweetwater County, Hydrologic Unit 14040104, on right bank 20 ft downstream from Gasson Bridge and 14.5 mi southwest of Eden.

DRAINAGE AREA.--1,720 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1972 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map. Prior to June 10, 1998, at site 1,250 ft upstream at present datum. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation of about 19,300 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	51	e25	e23	e24	e25	68	34	26	20	29	27
2	41	49	e24	e22	e24	e27	70	32	25	20	26	26
3	40	43	e24	e23	e24	e28	65	31	26	19	25	25
4	40	42	e24	e23	e24	e28	64	30	28	18	28	25
5	40	44	e25	e23	e25	e29	63	30	29	19	29	25
6	41	44	e26	e23	e25	e30	61	31	32	19	30	25
7	42	38	e26	e22	e25	e35	61	27	33	20	31	23
8	42	43	e25	e22	e24	e40	62	25	34	23	30	23
9	42	e43	e26	e22	e23	e43	58	24	31	24	31	22
10	42	e41	e26	e22	e23	e48	56	24	27	22	32	24
11	45	e40	e25	e23	e24	e60	52	23	27	25	47	22
12	47	e38	e24	e23	e24	e80	50	22	29	26	44	28
13	45	e34	e25	e23	e25	e100	50	22	34	26	36	31
14	44	e30	e25	e23	e25	131	49	22	42	22	37	33
15	43	e28	e26	e23	e25	172	47	23	43	23	37	30
16	42	e29	e25	e22	e24	67	46	26	32	21	32	31
17	42	e30	e24	e22	e25	54	46	27	28	21	30	31
18	42	e29	e24	e21	e25	44	45	26	30	18	37	32
19	44	e28	e24	e22	e26	39	45	25	31	18	37	31
20	44	e27	e23	e23	e27	54	45	24	26	20	33	29
21	44	e27	e24	e23	e28	65	43	24	26	21	34	27
22	46	e27	e24	e23	e27	60	43	24	27	18	35	28
23	46	e26	e23	e24	e27	68	42	23	25	16	36	27
24	45	e27	e23	e24	e27	93	40	22	27	16	34	28
25	45	e27	e23	e24	e26	100	39	22	25	18	32	25
26	45	e26	e23	e24	e26	102	38	22	27	24	32	23
27	45	e27	e23	e24	e26	92	37	22	26	30	30	22
28	48	e28	e23	e24	e25	79	36	24	25	30	29	21
29	47	e26	e22	e25	---	81	36	26	21	31	29	21
30	49	e26	e23	e24	---	72	35	30	21	24	28	21
31	50	---	e23	e23	---	69	---	28	---	25	26	---
TOTAL	1359	1018	750	712	703	2015	1492	795	863	677	1006	786
MEAN	43.8	33.9	24.2	23.0	25.1	65.0	49.7	25.6	28.8	21.8	32.5	26.2
MAX	50	51	26	25	28	172	70	34	43	31	47	33
MIN	40	26	22	21	23	25	35	22	21	16	25	21
AC-FT	2700	2020	1490	1410	1390	4000	2960	1580	1710	1340	2000	1560

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)
1972	61.9	102	36.0	1984
1973	54.2	149	31.5	1984
1974	38.6	60.4	22.1	1976
1975	31.3	55.5	17.4	1984
1976	33.9	74.0	16.4	1982
1977	86.0	393	36.4	1997
1978	111	462	28.3	1980
1979	77.7	208	19.7	1984
1980	149	627	28.8	1986
1981	107	340	21.8	1995
1982	79.5	119	32.4	1983
1983	72.6	100	26.2	1983
1984	1990	1991	1991	1990
1985	1991	1991	1991	1993
1986	1991	1991	1991	1976
1987	1991	1991	1991	1990
1988	1991	1991	1991	1990
1989	1991	1991	1991	1990
1990	1991	1991	1991	1990
1991	1991	1991	1991	1990
1992	1991	1991	1991	1990
1993	1991	1991	1991	1990
1994	1991	1991	1991	1990
1995	1991	1991	1991	1990
1996	1991	1991	1991	1990
1997	1991	1991	1991	1990
1998	1991	1991	1991	1990
1999	1991	1991	1991	1990
2000	1991	1991	1991	1990
2001	1991	1991	1991	1990

## GREEN RIVER BASIN

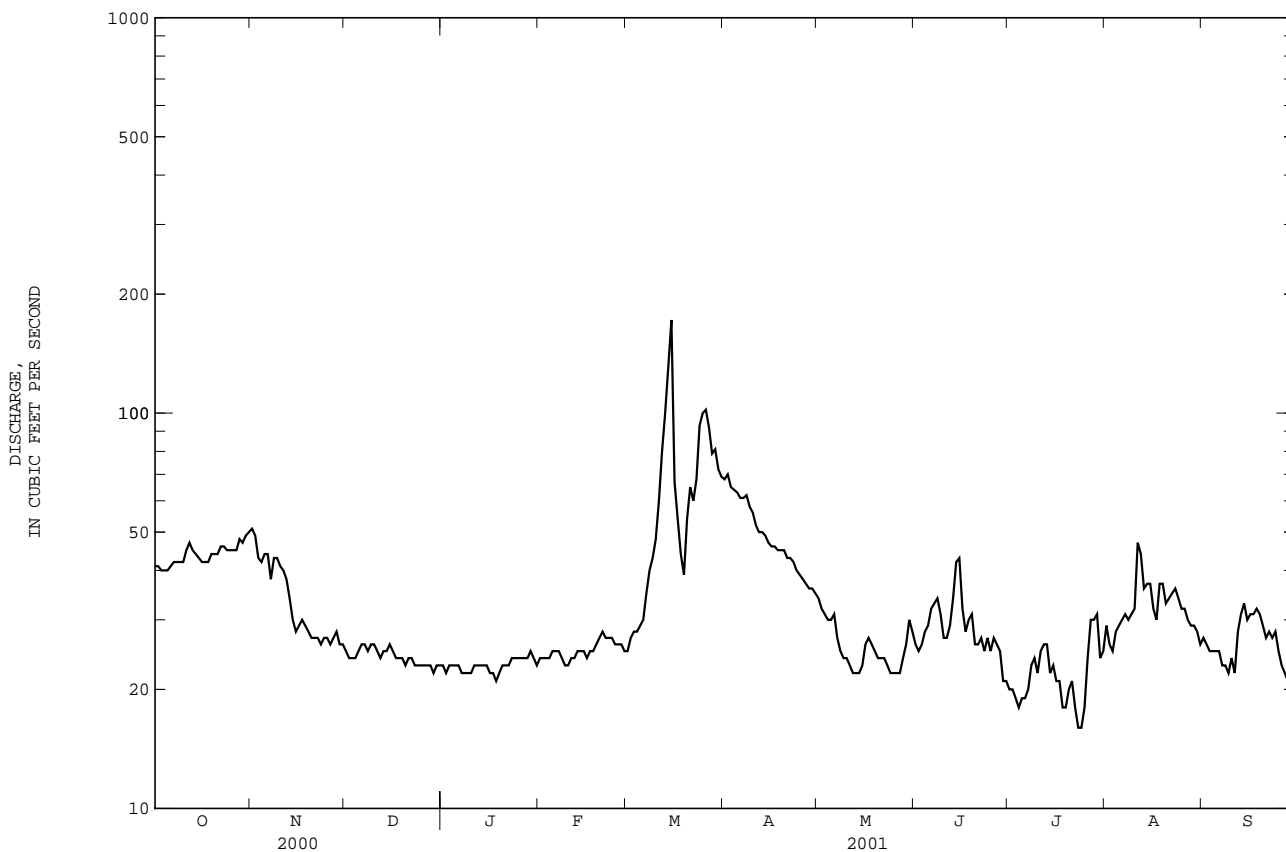
09216050 BIG SANDY RIVER AT GASSON BRIDGE, NEAR EDEN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1972 - 2001	
ANNUAL TOTAL	17006		12176		--	
ANNUAL MEAN	46.5		33.4		74.2	
HIGHEST ANNUAL MEAN	--		--		139	
LOWEST ANNUAL MEAN	--		--		30.6	
HIGHEST DAILY MEAN	83	Mar 28	172	Mar 15	5530	Apr 24 1980
LOWEST DAILY MEAN	22	Dec 29	16	Jul 23	7.0	Dec 24 1990
ANNUAL SEVEN-DAY MINIMUM	23	Dec 23	18	Jul 18	11	Dec 22 1990
MAXIMUM PEAK FLOW	--		339		7430 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		6.00 <sup>b</sup>		10.58	
ANNUAL RUNOFF (AC-FT)	33730		24150		53740	
10 PERCENT EXCEEDS	64		49		111	
50 PERCENT EXCEEDS	49		27		55	
90 PERCENT EXCEEDS	26		22		28	

a From rating curve extended above 2,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b Backwater from ice.

e Estimated.



## 09217000 GREEN RIVER NEAR GREEN RIVER, WY

LOCATION.--Lat 41°30'59", long 109°26'54", in NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.26, T.18 N., R.107 W., Sweetwater County, Hydrologic Unit 14040106, on right bank 0.1 mi downstream from Bitter Creek, 1.0 mi southeast of town of Green River, and 4.0 mi upstream from high-water line of Flaming Gorge Reservoir.

DRAINAGE AREA.--14,000 mi<sup>2</sup>, of which 4,260 mi<sup>2</sup>, including 3,959 mi<sup>2</sup> in Great Divide Basin in southern Wyoming, probably is noncontributing.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1951 to current year.

REVISED RECORDS.--WSP 1713: 1957. WDR-76-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,060 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Some regulation by Fontenelle Reservoir (station 09211150) since August 1963. Natural flow of stream affected by transbasin diversions, storage reservoirs, power generation, and diversions for irrigation of about 223,000 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge observed, 22,200 ft<sup>3</sup>/s, June 19, 1918, at site 1.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	831	938	e810	e860	e880	e660	628	e1580	789	601	620	546
2	867	909	e798	e880	e900	e610	681	e1600	738	605	613	537
3	858	898	e791	e890	e950	e600	679	e1550	758	650	548	528
4	854	893	e809	e890	e960	e590	632	e1450	771	602	548	528
5	870	892	e810	e920	e950	e610	637	1300	776	598	527	533
6	870	865	e809	e920	e970	e580	660	1280	811	604	514	559
7	877	887	e812	e930	e980	e600	656	1300	797	e610	516	559
8	877	e920	e809	e915	e950	e600	654	1330	750	e610	506	568
9	888	e900	e812	e900	e910	e580	640	1320	684	e650	509	635
10	890	e880	e809	e880	e910	e620	632	1340	665	e680	520	557
11	913	e840	e813	e901	e930	e660	625	1290	652	671	530	557
12	928	e780	e803	e900	e930	e620	603	1060	653	661	536	558
13	890	e740	e745	e930	e910	e580	579	1000	697	650	548	563
14	891	e690	e727	e920	e900	e570	563	965	671	622	524	547
15	894	e760	e740	e920	e900	e560	544	933	656	634	524	551
16	893	e790	e736	e920	e890	e560	527	881	675	633	509	547
17	894	e820	e692	e900	e860	e570	534	820	654	618	517	569
18	897	e860	e660	e880	e850	e580	589	813	629	629	527	610
19	900	e840	e640	e880	e870	e580	582	818	642	631	522	557
20	900	e850	e682	e894	e870	e580	e640	747	656	617	512	541
21	900	e880	e710	e910	e900	e610	e700	728	649	615	557	536
22	900	e890	e751	e900	e910	621	e860	726	656	622	561	517
23	893	e850	e780	e930	e900	632	e970	754	659	633	551	506
24	895	e850	e800	e900	e870	704	e900	752	668	633	560	503
25	908	e870	e860	e930	e800	744	e1100	752	664	622	533	506
26	903	e890	e850	e900	e760	715	e1200	764	672	614	517	506
27	898	e865	e870	e910	e710	672	e1300	773	638	642	520	505
28	900	e851	e840	e920	e670	664	e1400	782	630	649	526	513
29	900	e849	e880	e920	---	661	e1500	774	620	625	526	494
30	894	e837	e840	e900	---	672	e1600	774	602	620	525	489
31	903	---	e860	e900	---	642	---	765	---	631	527	---
TOTAL	27576	25584	24348	28050	24790	19247	23815	31721	20582	19482	16573	16225
MEAN	890	853	785	905	885	621	794	1023	686	628	535	541
MAX	928	938	880	930	980	744	1600	1600	811	680	620	635
MIN	831	690	640	860	670	560	527	726	602	598	506	489
AC-FT	54700	50750	48290	55640	49170	38180	47240	62920	40820	38640	32870	32180

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2001, BY WATER YEAR (WY)

	MEAN	972	860	741	760	831	1042	1633	2583	4821	3236	1569	1130
MAX	3109	1844	1419	1442	1980	1852	3416	5665	11700	9415	3577	7746	
(WY)	1983	1984	1972	1996	1974	1974	1962	1952	1986	1986	1982	1965	
MIN	279	281	272	266	267	350	516	434	414	368	372	251	
(WY)	1989	1989	1989	1989	1989	1989	1968	1992	1977	1977	1977	1988	

## GREEN RIVER BASIN

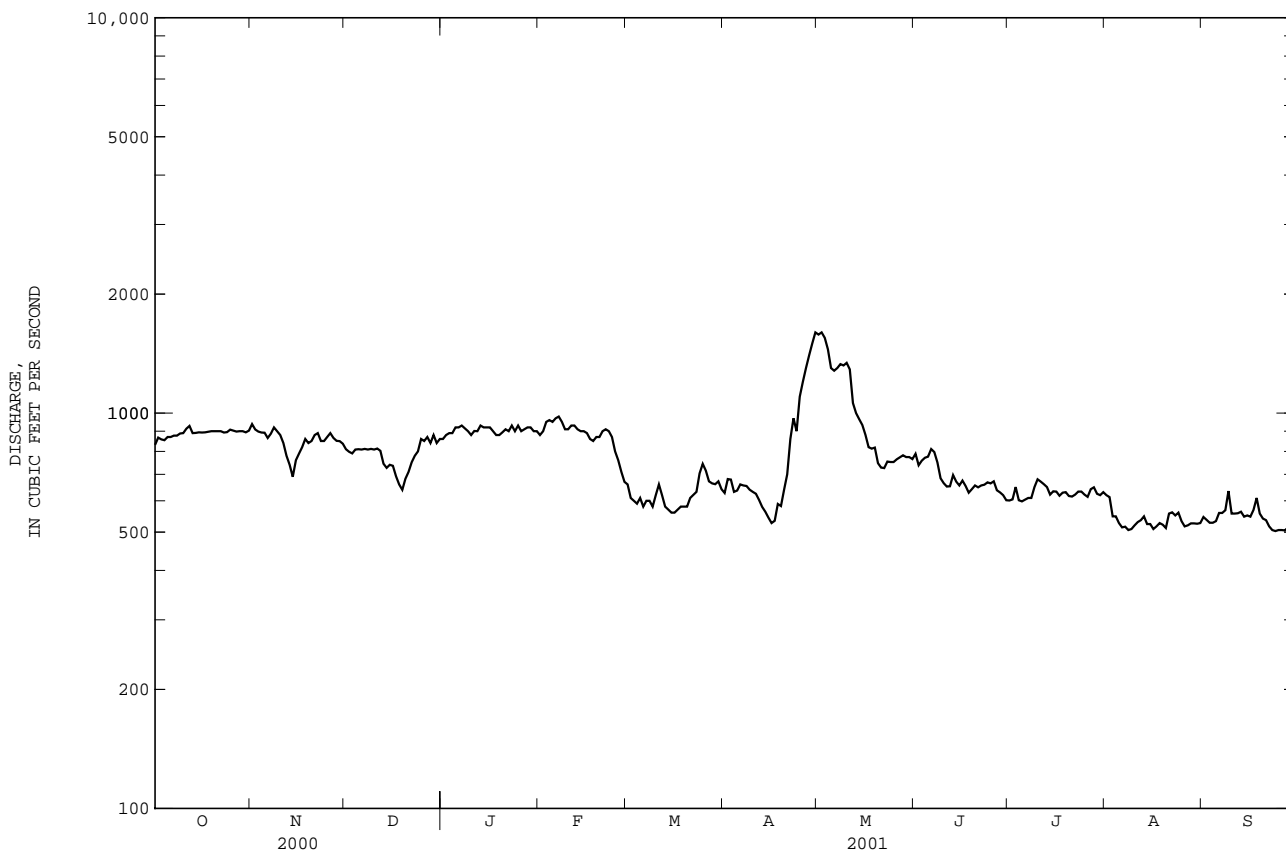
09217000 GREEN RIVER NEAR GREEN RIVER, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1952 - 2001	
ANNUAL TOTAL	395062		277993		--	
ANNUAL MEAN	1079		762		1683	
HIGHEST ANNUAL MEAN	--		--		3089	
LOWEST ANNUAL MEAN	--		--		689	
HIGHEST DAILY MEAN	1660	Jun 9	1600 <sup>e</sup>	Apr 30, May 2	16700	Sep 7 1965
LOWEST DAILY MEAN	640 <sup>e</sup>	Dec 19	489	Sep 30	170	Nov 16 1955
ANNUAL SEVEN-DAY MINIMUM	694	Dec 15	502	Sep 24	214	Dec 24 1962
MAXIMUM PEAK FLOW	--		1600 <sup>e</sup>	Apr 30	16800 <sup>a</sup>	Sep 7 1965
MAXIMUM PEAK STAGE	--		4.34 <sup>b</sup>	Nov 23	8.53 <sup>a</sup>	Sep 7 1965
ANNUAL RUNOFF (AC-FT)	783600		551400		1219000	
10 PERCENT EXCEEDS	1420		923		3680	
50 PERCENT EXCEEDS	1060		747		1100	
90 PERCENT EXCEEDS	802		536		460	

a Caused by emergency release from Fontenelle Reservoir.

b Backwater from ice.

e Estimated.





09217000 GREEN RIVER NEAR GREEN RIVER, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1951 to September 1992.

WATER TEMPERATURES: May 1951 to September 1992.

SUSPENDED-SEDIMENT DISCHARGE: May 1951 to September 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-AIRE (DEG C) (00020)	TEMPER-WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 26...	0900	900	609	9.5	98	8.7	532	4.5	7.0	190	46.2	16.9	1.65
JAN 11...	1330	901	610	11.8	101	7.7	533	-3.0	.00	--	--	--	--
MAR 28...	1550	660	--	--	--	8.6	862	10.5	6.0	--	--	--	--
MAY 09...	1630	1320	611	9.2	112	8.5	541	23.0	14.0	--	--	--	--
JUL 12...	0910	651	--	--	--	8.2	496	22.0	19.0	--	--	--	--
AUG 16...	1455	517	618	9.0	127	8.6	500	29.5	21.5	--	--	--	--

DATE	SODIUM AD-SORP-TION RATIO (00931)	ANC TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT 26...	1	139	5.3	.3	3.5	134	.45	809	--	333
JAN 11...	--	--	--	--	--	--	--	--	345	--
MAR 28...	--	--	--	--	--	--	--	--	594	--
MAY 09...	--	--	--	--	--	--	--	--	346	--
JUL 12...	--	--	--	--	--	--	--	--	312	--
AUG 16...	--	--	--	--	--	--	--	--	322	--

## GREEN RIVER BASIN

09217010 GREEN RIVER BELOW GREEN RIVER, WY

LOCATION.--Lat 41°29'46", long 109°26'17", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.36, T.18 N., R.107 W., Sweetwater County, Hydrologic Unit 14040106, at bridge on county road, 1.7 mi downstream from Bitter Creek, 2.7 mi southeast of town of Green River, and 3.3 mi upstream from Logan Draw.

PERIOD OF RECORD.--Water years 1974 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) ATON) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) ATON) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT 26...	1125	900	610	11.2	116	8.6	593	9.0	7.0	<.041	.36	.060	E.004
JAN 11...	1555	901	--	--	--	--	585	-4.0	.00	.055	.26	.144	E.003
MAR 28...	1705	660	--	--	--	--	988	8.5	6.0	.095	.78	.191	E.005
MAY 09...	1725	1320	--	--	--	--	808	22.0	15.0	<.041	.53	.194	.010
JUL 12...	1010	651	--	--	--	--	565	25.0	19.5	<.040	.45	E.046	E.005
AUG 16...	1605	517	--	--	--	--	570	29.5	21.5	<.040	--	--	<.008

DATE	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)
OCT 26...	<.060	E.015	E.037
JAN 11...	<.060	.022	.067
MAR 28...	.065	.054	.381
MAY 09...	E.039	.022	.144
JUL 12...	<.060	E.010	.081
AUG 16...	--	<.020	--

E -- Estimated value.

09217900 BLACKS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 40°57'33", long 110°34'46", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.27, T.3 N., R.12 E., Summit County, Utah, Hydrologic Unit 14040107, on left bank 1 mi downstream from East Fork, 2.7 mi south of Utah-Wyoming State line, and 18 mi south of Robertson.

DRAINAGE AREA.--130 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1937 to July 1939 (published as "at Blacks Fork Ranger Station"), July 1966 to September 1986, October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 8,811.3 ft above sea level (Bureau of Reclamation benchmark). Datums published from October 1968 to September 1978 are incorrect. October 1937 to July 1939, at site 970 ft downstream at different datum, July 1966 to September 1986 and October 1992 to September 1993 at site 0.2 mi downstream at datum 6.5 ft lower. U.S. Geological Survey data collection platform with satellite telemetry at station.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	43	e26	e31	25	e17	22	282	550	156	49	35
2	41	e43	e25	33	23	e17	22	224	538	148	48	33
3	42	e43	e26	33	21	e16	21	128	480	140	56	30
4	42	e42	e27	32	21	e16	20	164	428	135	61	30
5	41	e42	e28	31	20	e17	21	150	392	136	54	28
6	41	e40	e29	30	e20	e16	22	141	353	132	48	29
7	41	e40	e28	28	e21	e16	22	145	385	138	49	28
8	41	e40	e27	28	e19	e15	21	180	397	126	46	29
9	41	e38	e25	29	e17	15	29	252	413	168	46	28
10	47	e36	e25	29	e16	15	25	328	416	153	55	27
11	57	e36	e26	27	e17	15	25	386	394	140	46	26
12	51	e36	e27	27	e18	14	27	437	392	134	42	26
13	49	e34	e28	28	e19	13	23	499	334	139	43	33
14	51	e32	e26	27	e19	e13	24	562	276	133	44	33
15	47	e31	e25	25	e19	14	27	618	229	159	41	26
16	47	e31	e25	24	e20	14	29	1180	214	115	38	25
17	47	e29	e25	24	e20	13	41	1020	218	102	36	32
18	50	e28	e24	23	e21	13	58	784	219	94	35	40
19	49	e28	e23	23	e20	14	76	679	219	87	34	27
20	46	e28	e24	21	20	14	77	666	215	81	33	25
21	49	e27	e25	21	18	15	70	554	215	76	48	25
22	47	e27	e25	21	17	17	64	518	218	71	49	25
23	46	e27	e26	20	17	20	60	600	210	66	39	24
24	46	e28	e25	20	17	21	66	708	224	63	35	23
25	44	e28	e25	20	e17	21	80	741	222	60	33	23
26	42	e29	e24	21	e18	22	103	712	210	60	32	23
27	43	e30	e26	22	e17	21	128	670	198	60	32	23
28	43	e29	e27	24	e16	21	170	614	188	56	31	23
29	43	e28	e27	24	---	20	213	583	180	52	30	22
30	45	e26	e28	25	---	20	234	575	166	50	35	22
31	45	---	e30	25	---	22	---	533	---	53	42	---
TOTAL	1406	999	807	796	533	517	1820	15633	9093	3283	1310	823
MEAN	45.4	33.3	26.0	25.7	19.0	16.7	60.7	504	303	106	42.3	27.4
MAX	57	43	30	33	25	22	234	1180	550	168	61	40
MIN	41	26	23	20	16	13	20	128	166	50	30	22
AC-FT	2790	1980	1600	1580	1060	1030	3610	31010	18040	6510	2600	1630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	MEAN	53.6	40.2	32.6	27.3	24.1	25.0	51.3	403	764	333	108	67.7
MAX	136	62.0	50.0	55.7	36.9	38.6	112	789	1273	1003	232	157	
(WY)	1983	1974	1974	1997	1974	1969	1985	1984	1983	1975	1983	1982	
MIN	23.9	20.8	11.1	6.73	9.32	9.78	19.4	134	223	60.5	32.2	27.4	
(WY)	1993	2000	1977	1977	1977	1994	1975	1975	2000	2000	2000	2001	

## GREEN RIVER BASIN

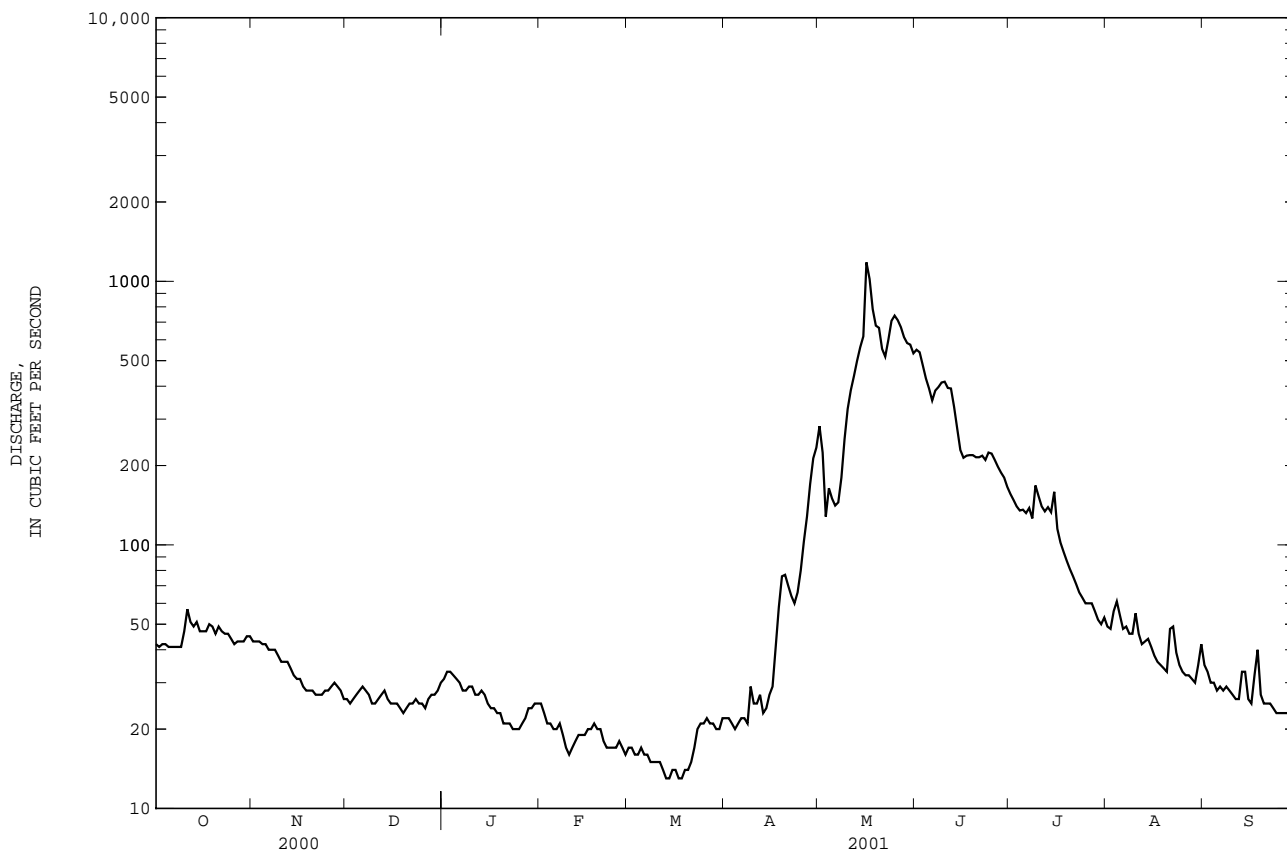
09217900 BLACKS FORK NEAR ROBERTSON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1966 - 2001	
ANNUAL TOTAL	33017		37020		--	
ANNUAL MEAN	90.2		101		161	
HIGHEST ANNUAL MEAN	--		--		228	1983
LOWEST ANNUAL MEAN	--		--		79.3	1977
HIGHEST DAILY MEAN	930	May 24	1180	May 16	1880	Jun 19 1983
LOWEST DAILY MEAN	14	Mar 15	13	Mar 13,14,17,18	3.2	Apr 2 1994
ANNUAL SEVEN-DAY MINIMUM	16	Mar 12	13	Mar 12	3.9	Apr 2 1994
MAXIMUM PEAK FLOW	--		1490	May 16	2480 <sup>a</sup>	Jun 19 1983
MAXIMUM PEAK STAGE	--		4.16	May 16	5.17 <sup>b</sup>	Jun 15 1995
ANNUAL RUNOFF (AC-FT)	65490		73430		116700	
10 PERCENT EXCEEDS	220		278		494	
50 PERCENT EXCEEDS	38		33		45	
90 PERCENT EXCEEDS	24		19		21	

a Gage height, 4.91 ft, site and datum then in use.

b Discharge, 2,210 ft<sup>3</sup>/s.

e Estimated.



## 09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY

LOCATION.--Lat 41°03'15", long 100°23'52", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.5, T.12 N., R.115 W., Uinta County, Hydrologic Unit 14040107, Wasatch National Forest, on left bank 60 ft downstream from bridge, 1.0 mi upstream from Gilbert Creek, 6.1 mi downstream from State Line Reservoir, and 9.0 mi south of Robertson.

DRAINAGE AREA.--53.0 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1939 to September 1984, April to September 2001 (no winter records since 1971). Monthly discharge only for some periods, published in WSP 1313. Prior to Oct. 1, 1978, published as East Fork of Smith Fork near Robertson.

REVISED RECORDS.--WSP 979: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,470 ft, from topographic map. Prior to July 12, 1957, at datum 3.96 ft higher.

REMARKS.--Records fair, except those for estimated daily discharges, which are poor. Flow completely regulated by State Line Reservoir, 6.1 mi upstream, total capacity, 14,000 acre-ft, dead storage is about 2,000 acre-ft, since May 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e12	9.7	260	240	64	25
2	---	---	---	---	---	---	e12	8.7	265	236	65	24
3	---	---	---	---	---	---	e13	162	260	219	65	24
4	---	---	---	---	---	---	e13	262	259	211	64	28
5	---	---	---	---	---	---	e12	152	260	202	64	32
6	---	---	---	---	---	---	e12	11	260	201	64	32
7	---	---	---	---	---	---	e11	11	262	200	52	32
8	---	---	---	---	---	---	e10	13	226	196	44	32
9	---	---	---	---	---	---	e10	12	196	196	44	32
10	---	---	---	---	---	---	e10	11	196	147	44	32
11	---	---	---	---	---	---	e10	9.0	192	92	44	28
12	---	---	---	---	---	---	e11	8.1	233	92	44	26
13	---	---	---	---	---	---	e11	7.1	270	92	45	26
14	---	---	---	---	---	---	e12	7.3	269	94	50	26
15	---	---	---	---	---	---	e12	28	265	92	52	25
16	---	---	---	---	---	---	e12	61	262	89	52	26
17	---	---	---	---	---	---	e12	69	262	77	51	26
18	---	---	---	---	---	---	e13	74	262	66	52	26
19	---	---	---	---	---	---	e11	78	200	66	51	25
20	---	---	---	---	---	---	e11	79	153	59	55	25
21	---	---	---	---	---	---	e11	80	157	52	42	25
22	---	---	---	---	---	---	e12	79	163	52	36	25
23	---	---	---	---	---	---	e12	81	163	52	36	25
24	---	---	---	---	---	---	e11	82	163	64	35	25
25	---	---	---	---	---	---	e12	80	163	74	35	32
26	---	---	---	---	---	---	e12	118	211	75	35	35
27	---	---	---	---	---	---	11	153	249	74	35	35
28	---	---	---	---	---	---	12	161	245	74	29	35
29	---	---	---	---	---	---	12	165	242	74	25	35
30	---	---	---	---	---	---	11	212	241	74	25	35
31	---	---	---	---	---	---	---	252	---	69	25	---
TOTAL	---	---	---	---	---	---	346	2535.9	6809	3601	1424	859
MEAN	---	---	---	---	---	---	11.5	81.8	227	116	45.9	28.6
MAX	---	---	---	---	---	---	13	262	270	240	65	35
MIN	---	---	---	---	---	---	10	7.1	153	52	25	24
AC-FT	---	---	---	---	---	---	686	5030	13510	7140	2820	1700

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)\*

MEAN	15.9	10.9	8.10	7.15	7.19	8.00	19.1	105	216	106	42.5	28.0
MAX	34.8	19.0	16.9	16.4	13.4	15.0	90.0	221	628	374	120	91.2
(WY)	1962	1952	1966	1966	1966	1943	1946	1974	1983	1975	1965	1995
MIN	5.21	5.50	2.11	1.34	1.55	2.14	3.71	26.6	59.3	15.9	6.64	6.68
(WY)	1957	1957	1963	1963	1963	1963	1982	1983	1954	1940	1940	1956

## GREEN RIVER BASIN

09220000 EAST FORK OF SMITHS FORK NEAR ROBERTSON, WY--Continued

## SUMMARY STATISTICS

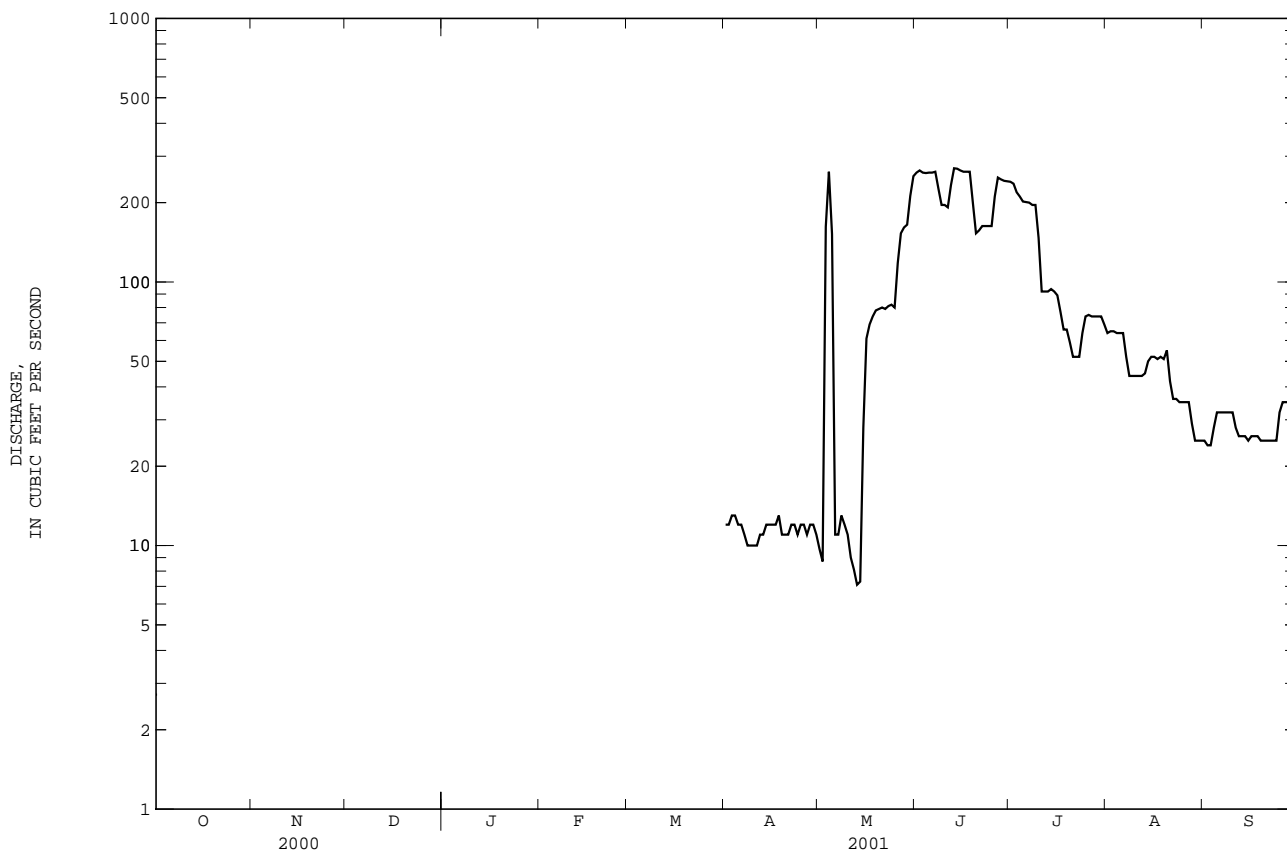
FOR 2001 WATER YEAR\*

WATER YEARS 1939 - 2001\*

ANNUAL MEAN	--		47.1	
HIGHEST ANNUAL MEAN	--		88.9	1965
LOWEST ANNUAL MEAN	--		25.4	1954
HIGHEST DAILY MEAN	270	Jun 13	1200	Jun 24 1983
LOWEST DAILY MEAN	7.1	May 13	1.0	Dec 17 1962
ANNUAL SEVEN-DAY MINIMUM	9.6	May 8	1.0	Dec 17 1962
MAXIMUM PEAK FLOW	290	May 3	1450	Jun 10 1965
MAXIMUM PEAK STAGE	5.02	May 3	6.75	Jun 10 1965
ANNUAL RUNOFF (AC-FT)	--		34160	
10 PERCENT EXCEEDS	242		168	
50 PERCENT EXCEEDS	51		20	
90 PERCENT EXCEEDS	11		6.0	

\* For period of operation.

e Estimated.



09222000 BLACKS FORK NEAR LYMAN, WY

LOCATION.--Lat 41°27'08", long 110°10'20", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.15, T.17 N., R.113 N., Uinta County, Hydrologic Unit 14040107, 200 ft downstream from bridge on old U.S. Highway 30S, 8.5 mi downstream from Smiths Fork, and 11 mi northeast of Lyman.

DRAINAGE.--821 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1962 to 1989, October 1995 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1962 to September 1983.

WATER TEMPERATURES: May 1962 to September 1983.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	
OCT													
25...	1215	23	605	9.6	101	8.4	2140	9.5	7.0	--	E8k	181	11
MAR													
27...	1630	177	605	9.4	98	8.3	862	8.3	7.0	E11k	E22k	1020	488
JUN													
21...	1105	3.8	--	--	--	8.2	1690	23.0	18.0	150	180	65	.66
AUG													
14...	1420	9.2	610	7.8	117	8.3	2150	27.0	24.0	E33k	150	31	.77

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## GREEN RIVER BASIN

09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY

LOCATION.--Lat 42°06'38", long 110°42'32", in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.35, T.25 N., R.117 W., Lincoln County, Hydrologic Unit 14040107, on left bank 2.0 mi downstream from Pole Creek, 4.6 mi upstream from Taylor Creek, and 22 mi northwest of Frontier.

DRAINAGE AREA.--128 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1970, published as "near Elk Creek ranger station."

GAGE.--Water-stage recorder. Elevation of gage is 7,455 ft above sea level, from topographic map. October 1952 to Sept. 2, 1971, at site 270 ft upstream at present datum, Sept. 3, 1971, to July 30, 1980, at site 150 ft upstream at present datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversion upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	13	e16	e18	e14	e13	49	188	95	21	5.9	1.8
2	19	9.3	e15	e19	e14	e14	66	e165	92	19	6.1	3.3
3	16	e9.0	e15	e18	e13	e15	48	e135	80	17	5.8	3.3
4	14	e8.4	e16	e17	e13	e15	37	e160	77	17	10	3.3
5	13	e9.4	e17	e17	e12	e15	39	e155	74	16	12	3.1
6	14	e5.3	e18	e16	e12	e16	45	e150	69	15	8.9	3.4
7	11	e6.4	e17	e16	e13	e16	41	e145	62	15	6.0	4.4
8	9.3	e6.0	e16	e15	e12	e16	35	e140	57	15	5.6	4.6
9	11	e7.0	e16	e15	e11	e15	27	e145	55	15	5.2	4.9
10	12	e7.2	e15	e16	e11	e15	26	e150	50	16	4.9	5.4
11	22	e5.5	e16	e16	e10	e14	25	e171	47	16	4.1	5.7
12	36	e5.3	e16	e15	e11	e15	25	168	47	16	4.0	5.4
13	34	e6.2	e17	e15	e12	e15	22	167	62	16	4.1	5.3
14	39	e6.8	e16	e15	e12	e14	22	179	58	16	5.0	5.8
15	38	e8.0	e16	e16	e13	e14	22	187	51	15	4.8	7.1
16	33	e8.2	e15	e15	e13	e15	33	309	45	15	4.8	7.1
17	27	e8.2	e15	e14	e12	e15	73	302	40	14	4.4	6.7
18	27	e8.3	e14	e14	e13	e14	144	258	38	13	3.8	6.7
19	24	e10	e13	e13	e12	e14	183	229	36	12	3.1	7.6
20	23	e12	e14	e13	e12	e14	167	205	33	11	2.4	7.7
21	23	e14	e15	e13	e11	e15	120	186	30	10	2.1	7.0
22	26	e14	e14	e12	e11	e23	92	163	29	9.1	2.6	6.7
23	22	e14	e15	e12	e12	e33	91	147	27	9.1	3.6	5.8
24	14	e15	e15	e12	e12	e47	87	140	26	9.1	4.0	6.1
25	14	e15	e16	e11	e13	e50	139	138	27	8.7	4.0	6.2
26	16	e16	e15	e11	e14	e54	197	136	26	9.0	3.6	6.2
27	11	e17	e14	e12	e13	e50	163	136	25	8.5	3.4	6.2
28	10	e18	e15	e13	e13	e49	180	131	25	8.4	3.0	6.3
29	8.5	e18	e16	e14	---	e48	199	125	23	7.9	1.9	6.7
30	8.9	e17	e16	e14	---	e46	201	110	21	7.6	.92	7.1
31	15	---	e17	e15	---	e48	---	102	---	6.2	.92	---
TOTAL	607.7	317.5	481	452	344	757	2598	5222	1427	403.6	140.94	166.9
MEAN	19.6	10.6	15.5	14.6	12.3	24.4	86.6	168	47.6	13.0	4.55	5.56
MAX	39	18	18	19	14	54	201	309	95	21	12	7.7
MIN	8.5	5.3	13	11	10	13	22	102	21	6.2	.92	1.8
AC-FT	1210	630	954	897	682	1500	5150	10360	2830	801	280	331

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2001, BY WATER YEAR (WY)

	MEAN	22.3	19.5	16.3	14.9	15.3	21.0	103	417	395	97.1	29.7	21.5
MAX	54.2	34.4	27.8	26.4	29.1	38.2	398	970	1039	296	64.0	51.9	
(WY)	1983	1983	1984	1984	1958	1958	1971	1971	1986	1975	1983	1984	
MIN	11.1	9.37	9.37	6.23	5.61	6.77	19.8	40.5	24.0	9.32	4.55	5.56	
(WY)	1993	1961	1991	1967	1967	1965	1975	1977	1977	1977	2001	2001	



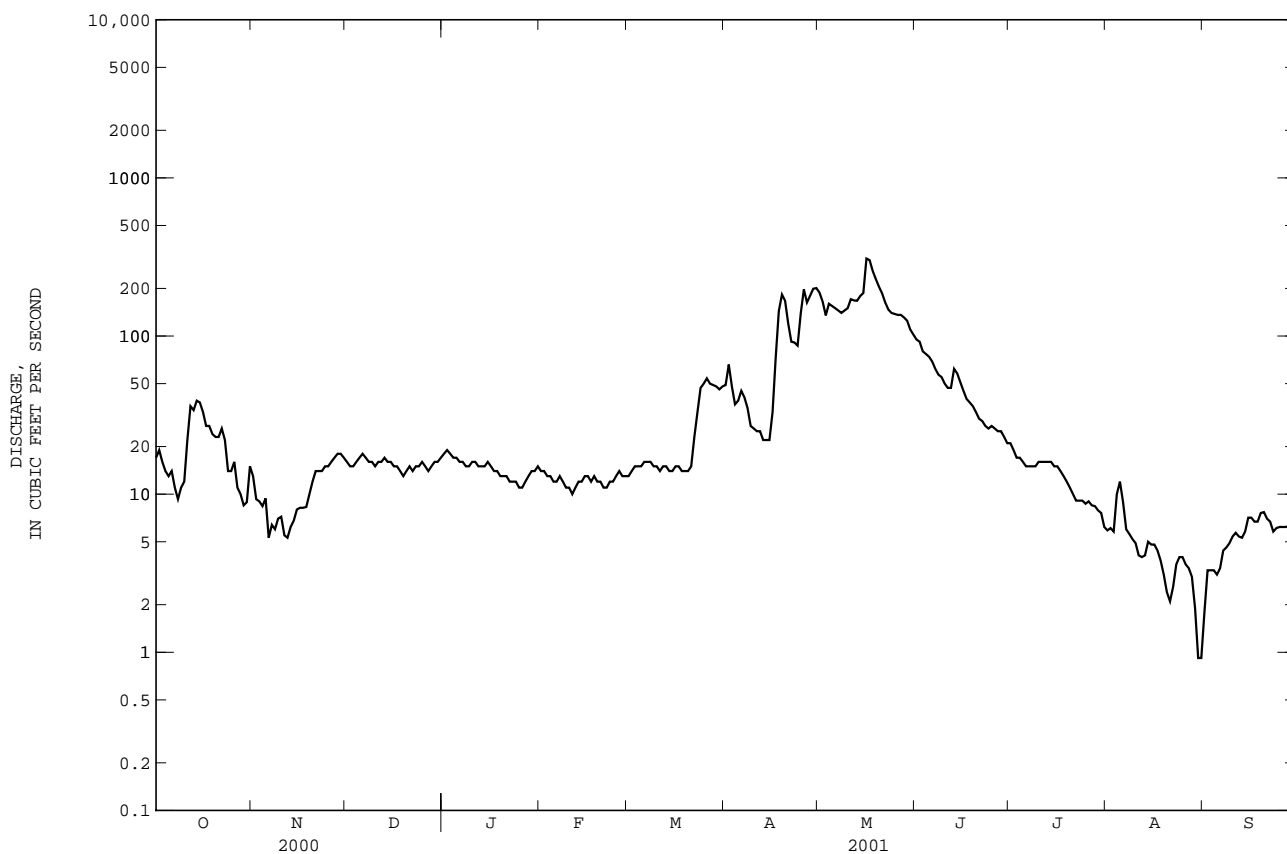
09223000 HAMS FORK BELOW POLE CREEK, NEAR FRONTIER, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1953 - 2001	
ANNUAL TOTAL	22213.9		12917.64		--	
ANNUAL MEAN	60.7		35.4		97.9	
HIGHEST ANNUAL MEAN	--		--		214	
LOWEST ANNUAL MEAN	--		--		17.7	
HIGHEST DAILY MEAN	394	May 25	309	May 16	2000	Jun 5 1986
LOWEST DAILY MEAN	5.3	Nov 6	.92	Aug 30,31	.10	Aug 17 1977
ANNUAL SEVEN-DAY MINIMUM	6.1	Nov 6	2.2	Aug 28	.62	Aug 11 1977
MAXIMUM PEAK FLOW	--		351		2230 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		3.93		8.10 <sup>b</sup>	
ANNUAL RUNOFF (AC-FT)	44060		25620		70940	
10 PERCENT EXCEEDS	212		133		305	
50 PERCENT EXCEEDS	19		15		22	
90 PERCENT EXCEEDS	9.0		5.4		12	

a Gage height, 6.72 ft.

b Site then in use.

e Estimated.



## GREEN RIVER BASIN

09224050 HAMS FORK NEAR DIAMONDVILLE, WY

LOCATION.--Lat 41°45'06", long 110°31'57", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.36, T.21 N., R.116 W., Lincoln County, Hydrologic Unit 14040107, at bridge on U.S. Highway 30 North, 1.9 mi south of Diamondville, and 2.8 mi south of Kemmerer.

PERIOD OF RECORD.--Water years 1974 to September 1989, October 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT 24...	0940	7.6	595	8.2	83	8.3	634	10.0	5.0	<.041	.620	.006	.046
MAR 26...	1630	109	594	9.2	81	8.2	548	7.0	.00	<.041	.217	E.004	<.018
JUN 19...	1645	50	--	--	--	9.2	354	24.5	20.0	<.040	<.050	<.006	<.020
AUG 14...	1755	4.7	599	12.0	178	9.2	436	25.5	22.5	E.028	.382	.021	.078

DATE	E COLI, MTEC MF WATER (COL./ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT 24...	--	110
MAR 26...	E4k	E8k
JUN 19...	E7k	E18k
AUG 14...	E4k	E5k

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

09224700 BLACKS FORK NEAR LITTLE AMERICA, WY

LOCATION.--Lat 41°32'46", long 109°41'34", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.15, T.18 N., R.109 W., Sweetwater County, Hydrologic Unit 14040107, on right bank 200 ft upstream from bridge on U.S. Highway 30, 4.2 mi upstream from Meadow Springs Wash, and 8.5 mi east of Little America.

DRAINAGE AREA.--3,100 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,127.66 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation from Meeks Cabin Reservoir, capacity, 32,470 acre-ft, since June 1971, Viva Naughton Reservoir, capacity, 42,400 acre-ft, from State Line Reservoir, capacity, 14,000 acre-ft, since April 1980, numerous smaller reservoirs, and diversions for upstream mines and irrigation of about 76,100 acres upstream from station. National Weather Service data collection platform with satellite telemetry at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	e36	e24	e21	e39	e76	277	137	64	36	14	1.1
2	42	e32	e25	e20	e42	e85	265	152	61	30	12	1.0
3	34	e29	e24	e21	e45	e90	252	130	64	28	10	.97
4	30	e28	e23	e20	e48	e95	299	119	64	28	9.9	.93
5	27	e26	e24	e22	e45	e100	325	141	77	24	8.2	1.2
6	25	e21	e25	e21	e42	e115	302	158	71	22	5.7	4.0
7	24	e22	e24	e20	e39	e130	333	512	98	23	3.9	4.2
8	23	e21	e25	e19	e36	e150	339	481	108	46	2.8	3.5
9	23	e23	e26	e22	e34	e170	290	401	87	262	2.3	2.6
10	23	e21	e27	e25	e36	e185	252	347	80	440	2.5	2.5
11	28	e19	e28	e28	e40	e200	218	317	68	520	1.8	2.5
12	29	e18	e26	e27	e43	e220	199	282	55	912	1.4	2.3
13	29	e17	e24	e30	e45	e250	184	266	51	725	.99	2.1
14	35	e18	e22	e33	e47	e240	172	253	61	508	.65	5.9
15	40	e19	e23	e31	e52	e230	155	262	147	376	.48	5.2
16	39	e20	e24	e32	e56	e260	142	295	136	314	.42	4.5
17	37	e19	e23	e30	e60	e280	131	250	115	257	.36	17
18	36	e21	e22	e31	e66	e340	118	421	76	205	.32	26
19	33	e23	e20	e30	e72	e320	110	460	62	158	.30	103
20	32	e24	e23	e34	e76	e500	101	365	56	120	.26	39
21	33	e23	e22	e36	e80	e1400	103	337	47	90	1.4	25
22	33	e22	e21	e35	e76	1970	125	250	42	68	6.7	17
23	33	e20	e20	e34	e78	2250	143	192	39	55	3.5	13
24	34	e21	e19	e35	e85	1260	130	156	40	46	13	11
25	36	e22	e18	e36	e84	907	120	119	41	35	21	9.3
26	35	e23	e17	e35	e82	735	108	90	38	27	13	7.9
27	34	e25	e18	e37	e80	634	93	71	34	25	8.3	7.0
28	33	e26	e19	e38	e78	543	81	67	33	21	5.2	6.0
29	34	e27	e20	e38	---	430	81	64	30	17	3.0	5.3
30	33	e28	e21	e37	---	369	112	61	36	16	1.7	4.7
31	e33	---	e22	e35	---	317	---	63	---	16	1.1	---
TOTAL	1018	694	699	913	1606	14851	5560	7219	1981	5450	156.18	335.70
MEAN	32.8	23.1	22.5	29.5	57.4	479	185	233	66.0	176	5.04	11.2
MAX	58	36	28	38	85	2250	339	512	147	912	21	103
MIN	23	17	17	19	34	76	81	61	30	16	.26	.93
AC-FT	2020	1380	1390	1810	3190	29460	11030	14320	3930	10810	310	666

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

	100	107	78.1	80.8	112	343	502	957	1085	323	111	86.8
MEAN	100	107	78.1	80.8	112	343	502	957	1085	323	111	86.8
MAX	376	336	230	371	318	912	1310	2918	4573	1349	542	576
(WY)	1983	1983	1984	1971	1984	1997	1973	1984	1983	1975	1983	1983
MIN	7.05	13.6	5.44	3.94	26.4	33.9	51.2	21.1	14.0	4.36	.55	.000
(WY)	1980	1995	1995	1991	1989	1964	1990	1977	1977	1977	1994	1994

## GREEN RIVER BASIN

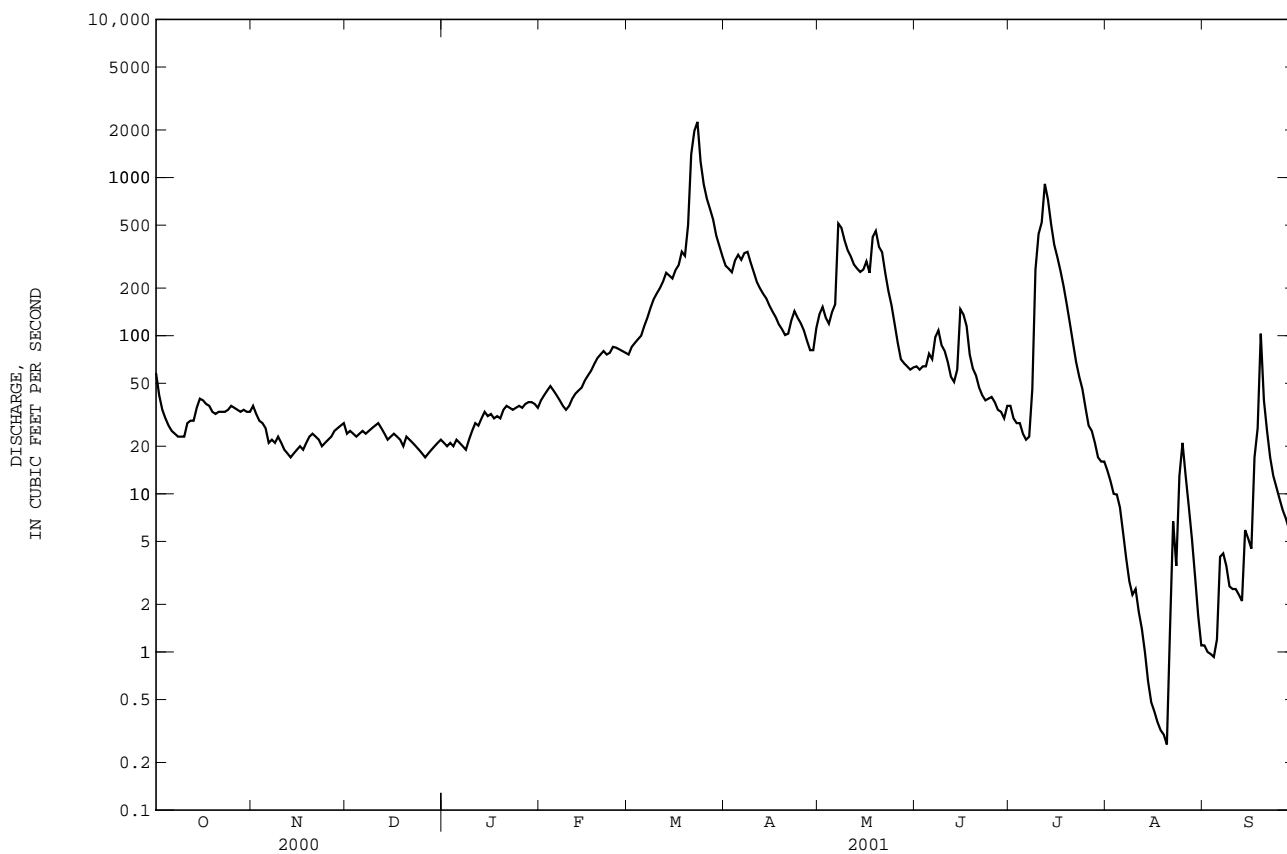
09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1962 - 2001	
ANNUAL TOTAL	37761.29		40482.88		--	
ANNUAL MEAN	103		111		325	
HIGHEST ANNUAL MEAN	--		--		888	
LOWEST ANNUAL MEAN	--		--		29.0	
HIGHEST DAILY MEAN	430	Apr 17	2250	Mar 23	9340	Jun 13 1965
LOWEST DAILY MEAN	.16	Aug 25-27	.26	Aug 20	.00	Many days,
ANNUAL SEVEN-DAY MINIMUM	.17	Aug 24	.40	Aug 14	.00	several years
MAXIMUM PEAK FLOW	--		2910	Mar 23	9980 <sup>a</sup>	Jun 13 1965
MAXIMUM PEAK STAGE	--		8.50	Mar 23	11.18 <sup>b</sup>	Mar 13 1997
ANNUAL RUNOFF (AC-FT)	74900		80300		235500	
10 PERCENT EXCEEDS	250		292		936	
50 PERCENT EXCEEDS	70		35		118	
90 PERCENT EXCEEDS	4.8		5.3		20	

a Gage height, 10.90 ft.

b Backwater from ice.

e Estimated.



09224700 BLACKS FORK NEAR LITTLE AMERICA, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1951 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1951 to current year.

WATER TEMPERATURES: March 1951 to September 1963, December 1964 to current year.

INSTRUMENTATION.--Water-quality monitor for specific conductance and water temperature.

REMARKS.--Published as "near Green River" prior to October 1953 and as "near Marston" October 1953 to September 1964. Partial record of specific conductance and temperature for water years 1979 and 1980 are available at District Office.

Water-temperature records represent water temperature at sensor within 0.2°C.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 6,010 microsiemens/cm, Oct. 1, 1953; minimum daily, 194 microsiemens/cm, May 17, 1984.

WATER TEMPERATURES: Maximum, 40.0°C, July 31, Aug. 1-4, 1984; minimum, 0.0°C on many days during winter period most years.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum mean daily, 1,820 microsiemens/cm, Oct. 15; minimum mean daily, 506 microsiemens/cm, May 6.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
OCT 26...	0825	39	1920	-2.0	4.0	560	128	59.3	4.55	4	222	199	94.3
JAN 11...	0925	28	--	-6.0	.00	610	158	53.7	5.25	3	150	308	78.7
MAR 21...	1415	2090	532	16.0	1.5	120	32.1	9.46	2.40	2	62.4	113	23.0
MAY 09...	1305	444	920	24.0	15.0	170	42.3	14.7	5.06	4	127	185	54.3
JUN 21...	1430	46	1540	25.5	23.0	450	114	40.9	5.74	3	162	241	57.3
JUL 13...	1405	731	1070	30.0	21.0	270	72.1	22.1	5.62	3	123	241	51.2
AUG 17...	1005	.36	2510	21.5	17.0	500	99.7	61.2	8.59	7	335	168	121
SEP 12...	1720	2.0	2200	28.0	21.0	240	38.9	33.5	6.51	11	381	209	135

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	BORON, DIS- SOLVED (UG/L AS B) (01020)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
OCT 26...	.6	4.9	719	1.84	142	1350	498	<30
JAN 11...	.6	9.0	511	1.57	88.3	1150	609	<10
MAR 21...	.3	6.4	119	.44	1820	323	114	580
MAY 09...	.5	15.4	190	.76	673	561	221	<10
JUN 21...	.7	15.5	505	1.42	130	1050	299	<10
JUL 13...	.6	21.1	230	.91	1320	670	271	20
AUG 17...	.8	9.2	922	2.26	1.61	1660	576	<10
SEP 12...	.9	.5	665	1.89	7.68	1390	485	<10

## GREEN RIVER BASIN

09229500 HENRYS FORK NEAR MANILA, UT

LOCATION.--Lat 41°00'45", long 109°40'20", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.23, T.12 N., R. 109 W., Sweetwater County, WY, Hydrologic Unit 14040106, on right bank 0.8 mi north of Wyoming-Utah State line, 1.3 mi upstream from normal high-water line of Flaming Gorge Reservoir at elevation 6,045 ft, and 3.0 mi northeast of Manila, UT.

DRAINAGE AREA.--520 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1928 to September 1993, May to September 2001. Prior to October 1971, published as "at Linwood, UT."

REVISED RECORDS.--WSP 1443: 1955. WDR WY-76-2: 1970. WDR WY-92-1: 1991.

GAGE.--Water-stage recorder. Elevation of gage is 6,060 ft above sea level, from topographic map. Prior to Oct. 1, 1957, nonrecording gages or water-stage recorder at several sites and 2.0 mi downstream at various datums. Oct. 1, 1957, to Dec. 2, 1965, water-stage recorders at sites about 1.0 mi upstream at different datums.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Peoples Irrigation Canal diverts 5.9 mi upstream. Natural flow of stream affected by transbasin diversions, small storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	e480	299	e50	e6.8	e7.0
2	---	---	---	---	---	---	---	e550	292	e47	e6.2	e6.0
3	---	---	---	---	---	---	---	e240	282	e44	e6.0	e5.8
4	---	---	---	---	---	---	---	e90	236	e43	e6.8	e5.8
5	---	---	---	---	---	---	---	e180	195	e45	e6.5	e5.9
6	---	---	---	---	---	---	---	e145	160	e42	e6.1	e6.0
7	---	---	---	---	---	---	---	e130	128	e48	e5.8	e6.0
8	---	---	---	---	---	---	---	e120	129	e40	e6.0	e6.5
9	---	---	---	---	---	---	---	e117	131	e63	e5.8	e6.6
10	---	---	---	---	---	---	---	104	129	e100	e5.6	e6.3
11	---	---	---	---	---	---	---	105	123	e71	e6.1	e6.0
12	---	---	---	---	---	---	---	112	115	e67	e5.8	e6.0
13	---	---	---	---	---	---	---	134	147	e85	e5.1	e6.8
14	---	---	---	---	---	---	---	181	124	e80	e5.3	e7.4
15	---	---	---	---	---	---	---	220	e100	87	e5.0	e7.0
16	---	---	---	---	---	---	---	383	e76	86	e5.0	e6.5
17	---	---	---	---	---	---	---	628	e71	52	e4.8	e6.0
18	---	---	---	---	---	---	---	500	e75	34	e4.7	e6.4
19	---	---	---	---	---	---	---	598	e76	25	e4.8	e7.5
20	---	---	---	---	---	---	---	451	e71	22	e5.3	e6.3
21	---	---	---	---	---	---	---	420	e70	18	e6.0	6.3
22	---	---	---	---	---	---	---	346	e75	13	7.6	6.6
23	---	---	---	---	---	---	---	327	e72	11	6.2	6.5
24	---	---	---	---	---	---	---	407	e77	9.9	e6.4	6.5
25	---	---	---	---	---	---	---	461	e83	8.2	e5.1	6.1
26	---	---	---	---	---	---	---	431	e85	7.1	e5.0	6.1
27	---	---	---	---	---	---	---	456	e77	7.2	e5.0	5.7
28	---	---	---	---	---	---	---	433	e63	e7.0	e4.8	5.7
29	---	---	---	---	---	---	---	434	e58	e6.7	e4.7	5.6
30	---	---	---	---	---	---	---	366	e53	e6.4	e5.0	5.5
31	---	---	---	---	---	---	---	313	---	e6.4	e6.0	---
TOTAL	---	---	---	---	---	---	---	9862	3672	1231.9	175.3	188.4
MEAN	---	---	---	---	---	---	---	318	122	39.7	5.65	6.28
MAX	---	---	---	---	---	---	---	628	299	100	7.6	7.5
MIN	---	---	---	---	---	---	---	90	53	6.4	4.7	5.5
AC-FT	---	---	---	---	---	---	---	19560	7280	2440	348	374

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2001, BY WATER YEAR (WY)

	MEAN	47.2	55.4	47.6	42.7	46.2	69.8	85.5	155	277	93.9	50.3	34.2
MAX	176	117	105	103	88.6	165	196	541	1375	703	323	191	
(WY)	1983	1984	1985	1984	1984	1929	1944	1984	1983	1975	1965	1929	
MIN	.000	12.8	20.5	15.2	15.0	24.9	3.94	3.79	.10	.000	.090	.000	
(WY)	1935	1935	1933	1933	1933	1957	1935	1977	1934	1934	1940	1934	

09229500 HENRYS FORK NEAR MANILA, UT--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1929 - 2001\*

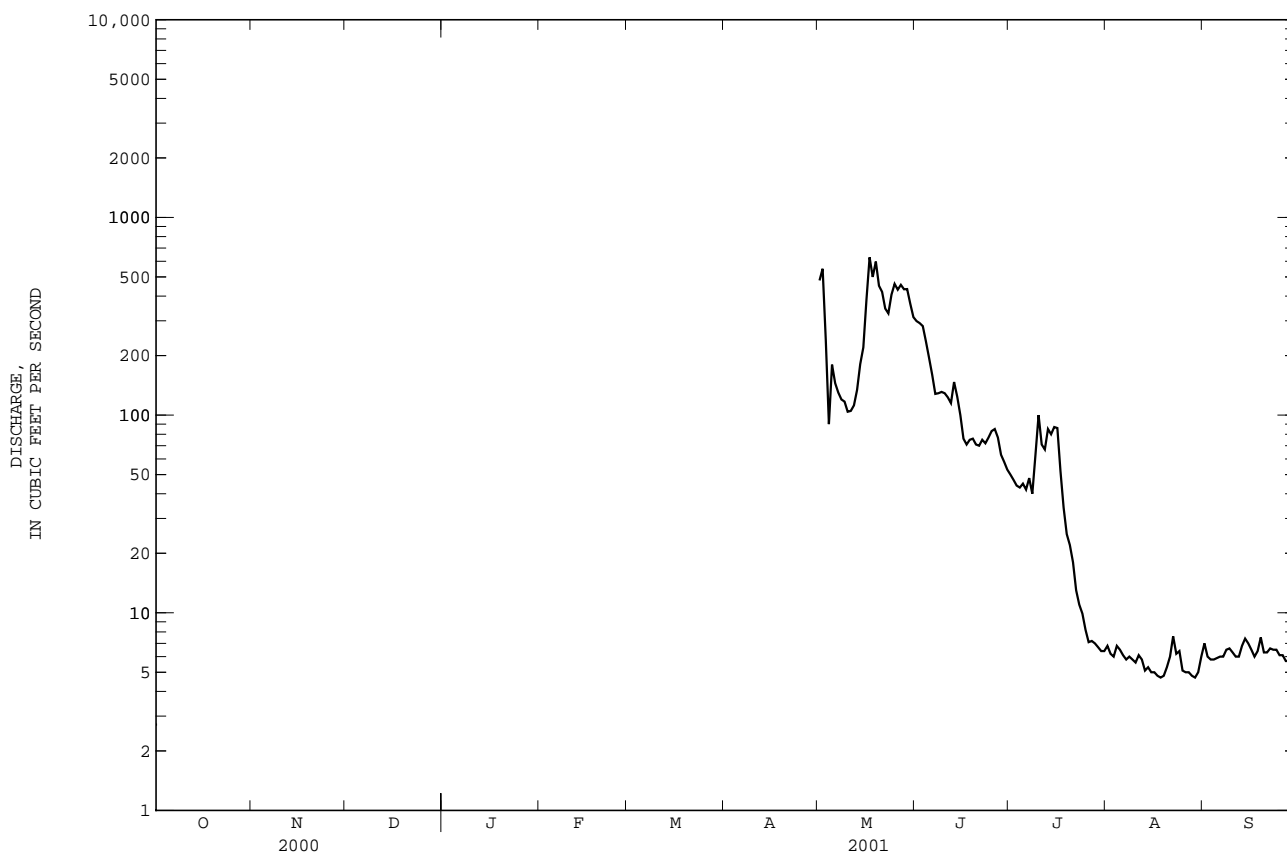
ANNUAL MEAN	--		83.8	
HIGHEST ANNUAL MEAN	--		273	1983
LOWEST ANNUAL MEAN	--		16.5	1934
HIGHEST DAILY MEAN	628	May 17	3780	Jun 13 1965
LOWEST DAILY MEAN	4.7	Aug 18,29	.00	Several days in 1933-35, 1939-40
ANNUAL SEVEN-DAY MINIMUM	--		.00 <sup>a</sup>	Jun 6 1934
MAXIMUM PEAK FLOW	687	May 17	6750 <sup>a</sup>	Aug 3 1936
MAXIMUM PEAK STAGE	4.88	May 17	9.42 <sup>b</sup>	Jul 15 1959
ANNUAL RUNOFF (AC-FT)	--		60700	

\* For period of operation.

a Maximum discharge determined, gage height, 7.19 ft, site and datum then in use, from floodmarks, from rating curve extended above 57 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

b Site and datum then in use. Discharge not determined.

e Estimated.



## GREEN RIVER BASIN

09234500 GREEN RIVER NEAR GREENDALE, UT

LOCATION.--Lat 40°54'30", long 109°25'20", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec. 15. T. 2 N., R. 22 E., Daggett County, Hydrologic Unit 14040106, Ashley National Forest on right bank 0.5 mi downstream from Flaming Gorge Dam, 2 mi south of Dutch John, 4 mi northeast of Greendale, and 407 mi from mouth.

DRAINAGE AREA.--19,350 mi<sup>2</sup>, approximately, including about 4,260 mi<sup>2</sup> which is probably noncontributing. This noncontributing area includes 3,959 mi<sup>2</sup> in Great Divide Basin in southern Wyoming.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WDR UT-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,594.48 ft above sea level. Prior to Sept. 2, 1959, water-stage recorder at site 2.2 mi upstream at different datum. Sept. 3, 1959, to Sept. 30, 1985, at datum 5.0 ft lower.

REMARKS.-- Records good. Flow completely regulated by Flaming Gorge Reservoir 0.5 mi upstream, beginning Nov. 1, 1962. Station operated and record provided by Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1030	e1020	971	964	1010	886	1170	1090	979	786	825
2	1010	1020	e1020	972	966	1010	1180	1170	1090	823	787	823
3	1010	1020	e1020	972	967	1010	1170	1170	857	800	788	824
4	1020	1020	e1020	972	968	1010	1170	1170	1090	786	786	823
5	1020	1020	e1020	971	960	1020	1170	1170	1090	791	785	822
6	1020	1020	e1020	972	958	1020	1180	943	1090	786	785	824
7	1020	1020	1060	968	959	1010	1170	1170	1090	787	802	825
8	1020	1020	1150	971	959	1010	930	1170	1100	787	820	826
9	1020	1020	1140	968	956	1010	1170	1150	1090	787	820	824
10	1020	1020	1110	967	957	1010	1170	1160	864	787	821	823
11	1020	1020	1140	1060	959	1010	1170	1430	1100	787	823	822
12	1020	1020	1140	968	958	1010	1170	2050	1100	788	822	822
13	1020	1020	1110	968	1020	1000	1170	2590	1100	787	821	824
14	1020	1020	985	968	952	1010	1180	3130	1100	786	823	825
15	1010	1020	987	974	953	1010	931	3680	1100	787	822	826
16	1010	1020	986	958	965	1010	1170	4320	1100	784	822	825
17	1020	1020	986	952	988	1010	1170	4480	859	785	822	1090
18	1030	1020	984	951	988	1010	1170	4400	1090	785	823	1190
19	1030	1020	971	950	989	1010	1170	3710	1090	784	822	847
20	1030	1020	969	950	990	1010	1170	3580	1090	785	822	819
21	1030	1020	980	947	989	1010	1180	4100	1090	785	823	820
22	1040	1020	980	947	994	1010	932	4490	1090	784	825	821
23	1030	1020	981	950	1010	1010	1300	4130	1090	785	824	821
24	1030	1020	981	950	993	1010	1460	3710	857	785	823	821
25	1020	e1020	981	951	993	1010	1170	3340	1090	786	822	821
26	1030	e1020	969	951	998	1010	1170	2990	1090	787	821	818
27	1030	e1020	968	951	1010	1010	1170	2640	1090	787	821	816
28	1030	e1020	969	952	1020	1010	1170	2270	1090	787	827	816
29	1030	e1020	966	e952	---	1010	929	1900	1090	786	822	817
30	1030	e1020	966	952	---	1010	1170	1440	1090	784	825	818
31	1030	---	969	951	---	1010	---	1140	---	785	825	---
TOTAL	31700	30610	31548	29857	27383	31320	34318	76963	31847	24612	25260	25318
MEAN	1023	1020	1018	963	978	1010	1144	2483	1062	794	815	844
MAX	1040	1030	1150	1060	1020	1020	1460	4490	1100	979	827	1190
MIN	1000	1020	966	947	952	1000	886	943	857	784	785	816
AC-FT	62880	60710	62580	59220	54310	62120	68070	152700	63170	48820	50100	50220

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	1902	2061	2250	2172	2149	1830	1971	2524	2581	2343	2005	1874
MEAN	1902	2061	2250	2172	2149	1830	1971	2524	2581	2343	2005	1874
MAX	3911	3655	3626	4145	4090	3818	4271	7146	8044	10130	5056	3729
(WY)	1983	1983	1973	1985	1984	1977	1997	1986	1999	1983	1983	1983
MIN	128	312	743	903	773	599	587	984	916	474	497	734
(WY)	1964	1964	1964	1971	1971	1964	1964	1990	1992	1965	1965	1965



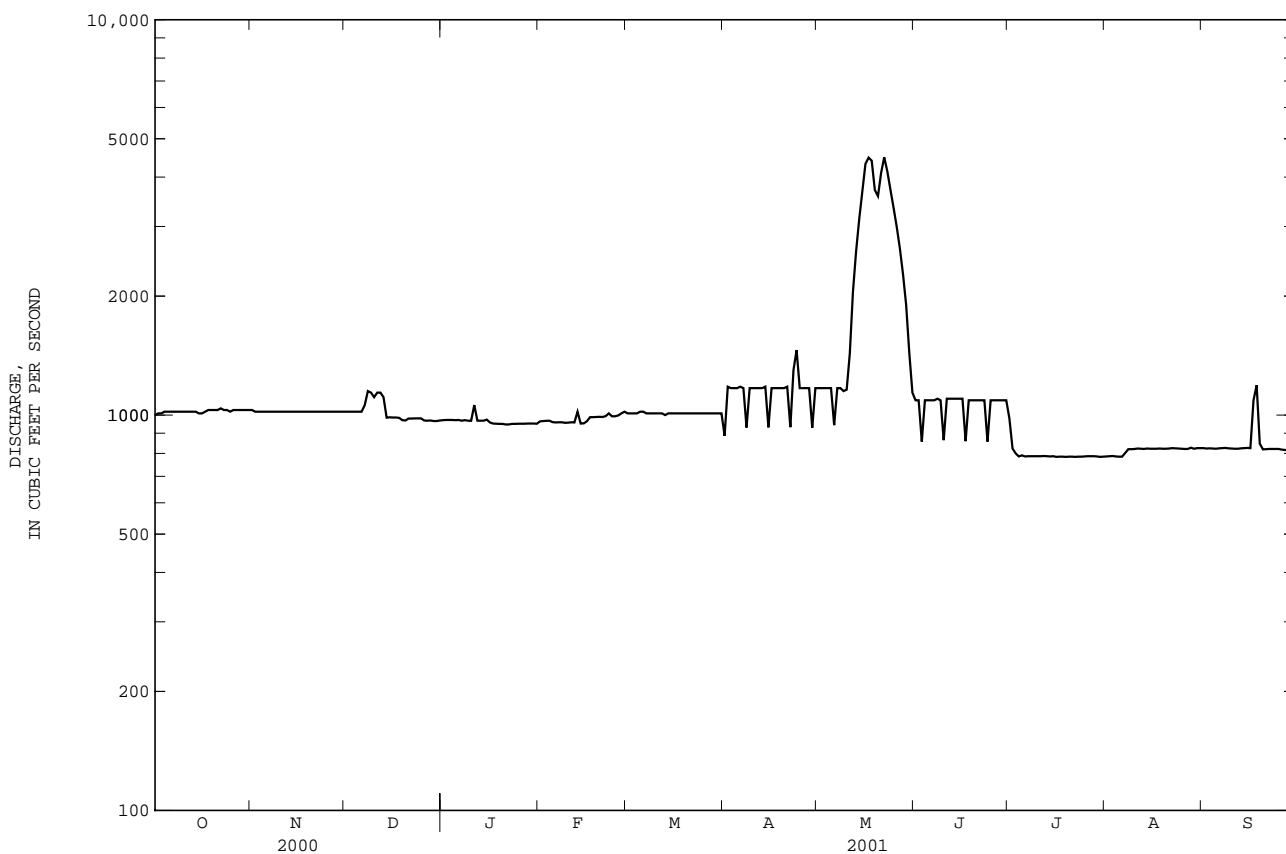
## 09234500 GREEN RIVER NEAR GREENDALE, UT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1964 - 2001	
ANNUAL TOTAL	605120		400736		--	
ANNUAL MEAN	1653		1098		2139	
HIGHEST ANNUAL MEAN	--		--		4270	1983
LOWEST ANNUAL MEAN	--		--		1044	1989
HIGHEST DAILY MEAN	4610	May 24	4490	May 22	12300	Jul 16 1983
LOWEST DAILY MEAN	966	Dec 29,30	784	Jul 16,19,22,30	90	Oct 8 1963
ANNUAL SEVEN-DAY MINIMUM	970	Dec 25	785	Jul 16	112	Oct 2 1963 <sup>b</sup>
MAXIMUM PEAK FLOW	--		4530	May 18	19600 <sup>a</sup>	Jun 12 1957 <sup>b</sup>
MAXIMUM PEAK STAGE	--		11.72	May 18	14.51	May 12 and Jun 6 1986 <sup>b</sup>
ANNUAL RUNOFF (AC-FT)	1200000		794900		1549000	
10 PERCENT EXCEEDS	2210		1170		3750	
50 PERCENT EXCEEDS	1400		1010		1870	
90 PERCENT EXCEEDS	1020		810		895	

a Gage height 10.60 ft.

b For period of operation, 1950 to current year, site and datum then in use.

e Estimated.



## GREEN RIVER BASIN

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40°59'58", long 107°08'34", in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to September 1999, April to September, 2001.

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,831.00 ft above sea level.

REMARKS.--Records good. Diversions for irrigation of about 2,000 acres upstream from station. Station operated and record provided by the Colorado District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	758	570	81	37	26
2	---	---	---	---	---	---	---	901	553	75	32	21
3	---	---	---	---	---	---	---	566	512	72	29	16
4	---	---	---	---	---	---	---	142	463	66	28	14
5	---	---	---	---	---	---	---	164	462	399	61	26
6	---	---	---	---	---	---	---	210	477	348	60	25
7	---	---	---	---	---	---	---	175	525	334	57	26
8	---	---	---	---	---	---	---	158	571	312	61	33
9	---	---	---	---	---	---	---	130	745	273	57	41
10	---	---	---	---	---	---	---	122	827	252	55	44
11	---	---	---	---	---	---	---	115	1010	233	102	35
12	---	---	---	---	---	---	---	101	964	214	69	28
13	---	---	---	---	---	---	---	107	977	221	66	25
14	---	---	---	---	---	---	---	107	1040	209	78	26
15	---	---	---	---	---	---	---	93	1060	191	74	30
16	---	---	---	---	---	---	---	120	1170	166	62	33
17	---	---	---	---	---	---	---	163	1230	148	55	28
18	---	---	---	---	---	---	---	240	997	135	48	24
19	---	---	---	---	---	---	---	346	994	127	47	21
20	---	---	---	---	---	---	---	465	1060	126	43	20
21	---	---	---	---	---	---	---	353	816	139	41	22
22	---	---	---	---	---	---	---	279	711	130	38	25
23	---	---	---	---	---	---	---	236	699	120	37	25
24	---	---	---	---	---	---	---	204	724	115	36	22
25	---	---	---	---	---	---	---	266	737	110	35	19
26	---	---	---	---	---	---	---	434	744	108	36	17
27	---	---	---	---	---	---	---	575	766	116	47	15
28	---	---	---	---	---	---	---	682	729	103	38	14
29	---	---	---	---	---	---	---	756	697	101	33	13
30	---	---	---	---	---	---	---	658	659	90	46	12
31	---	---	---	---	---	---	---	604	---	32	14	---
TOTAL	---	---	---	---	---	---	---	7401	24683	6918	1708	789
MEAN	---	---	---	---	---	---	---	274	796	231	55.1	25.5
MAX	---	---	---	---	---	---	---	756	1230	570	102	44
MIN	---	---	---	---	---	---	---	93	462	90	32	12
AC-FT	---	---	---	---	---	---	---	14680	48960	13720	3390	1560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2001, BY WATER YEAR (WY)\*

	MEAN	39.6	36.5	32.4	31.9	32.8	51.4	263	1089	946	161	39.8	29.6
	MAX	91.8	77.8	59.4	74.5	59.5	139	842	2122	2231	519	97.3	80.5
	(WY)	1962	1962	1983	1983	1962	1989	1974	1984	1983	1983	1945	1997
	MIN	17.6	18.4	14.8	16.3	20.4	23.8	77.6	405	178	33.4	17.0	11.0
	(WY)	1953	1959	1977	1945	1945	1977	1973	1977	1987	1977	1954	1944

09253000 LITTLE SNAKE RIVER NEAR SLATER, CO--Continued

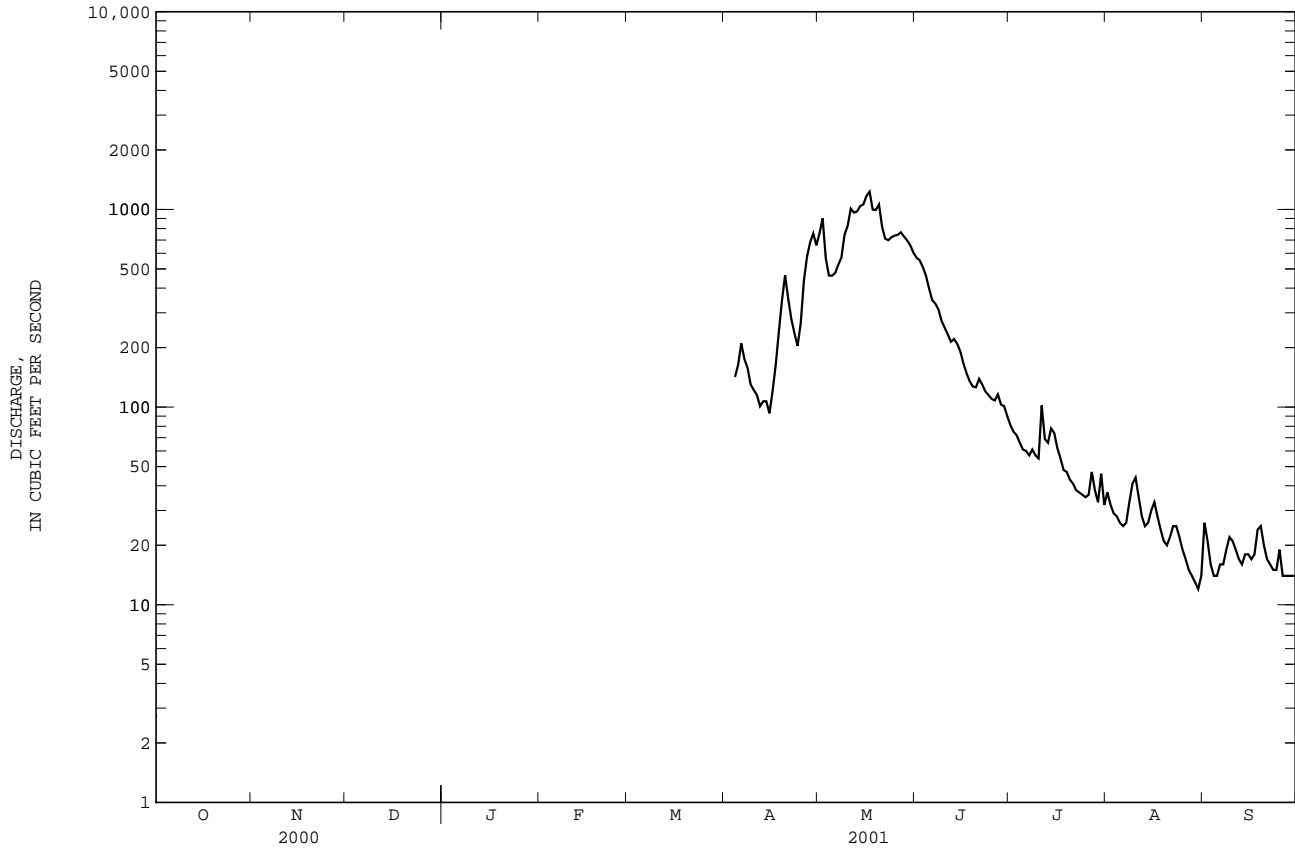
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1944 - 2001\*

ANNUAL MEAN	--		232	
HIGHEST ANNUAL MEAN	--		423	1984
LOWEST ANNUAL MEAN	--		86.6	1977
HIGHEST DAILY MEAN	1230	May 17	3960	May 24 1984
LOWEST DAILY MEAN	12	Aug 30	4.2	Sep 9 1988
ANNUAL SEVEN-DAY MINIMUM	15	Aug 25	6.2	Sep 4 1988
MAXIMUM PEAK FLOW	1430	May 17	4780 <sup>a</sup>	May 23 1984
MAXIMUM PEAK STAGE	6.19	May 17	9.95	Apr 25 1974
ANNUAL RUNOFF (AC-FT)			167900	

\* For period of operation.  
 a Gage height, 8.78 ft.



## GREEN RIVER BASIN

09253455 HAGGARTY CREEK ABOVE BELVIDERE DITCH, NEAR ENCAMPMENT, WY

LOCATION.--Lat 41°09'02", long 107°07'06", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.25, T.14 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, 0.5 mi upstream from State Highway 70, 1.6 mi upstream from mouth, and 17 mi west of Encampment, WY.

PERIOD OF RECORD.--October 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
MAY 30...	1400	79	565	9.2	100	7.6	23	17.0	6.0	9	2.50	.589	.35	
AUG 15...	1010	2.1	567	8.7	101	7.7	42	10.5	9.0	18	5.20	1.15	.46	
DATE		SODIUM AD-SORP- TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS-FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-PT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
MAY 30...	.1	.8	10	.2	E.1	6.5	1.5	.03	3.97	19	32	E.03	E.1	
AUG 15...	.1	1.3	20	.2	<.2	8.8	2.1	.04	.18	31	6	<.05	.3	
DATE		BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
MAY 30...	8.9	<.06	E11	.05	E.4	.19	66.0	20	.33	<4.0	1.3	<.01	<.2	
AUG 15...	15.5	<.06	<13	<.04	<.8	.07	19.1	30	<.08	<4.0	5.5	<.02	<.2	
DATE				NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)				
MAY 30...				.60	<.3	<1.0	12.0	<8.0	<1	.03				
AUG 15...				.47	E.3	<1.0	22.8	<8.0	<1	<.02				

E -- Estimated value.

09253465 WEST FORK BATTLE CREEK AT BATTLE CREEK CAMPGROUND, NEAR SAVERY, WY

LOCATION.--Lat 41°05'37", long 107°09'31", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.15, T.13 N., R.87 W., Carbon County, Hydrologic Unit 14050003, Medicine Bow National Forest, at Battle Creek Campground, 1.1 mi upstream from mouth, and 15 mi east of Savery.

PERIOD OF RECORD.--October 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
MAY 30...	1000	110	590	9.4	100	7.2	30	21.5	7.0	12	3.70	.773	.34	
AUG 15...	1310	1.2	590	7.4	101	7.9	189	19.0	17.5	79	24.5	4.17	.76	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CAC03 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
MAY 30...	.1	1.0	13	.4	<.2	6.6	2.0	.03	6.79	23	32	E.03	E.1	
AUG 15...	.4	7.4	56	3.8	.6	10.9	29.8	.16	.38	116	5	<.05	.2	
DATE		BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM, DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY, DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)
MAY 30...	10.2	<.06	15	.13	E.5	.08	33.1	30	.12	<4.0	1.4	<.01	E.1	
AUG 15...	42.2	<.06	22	<.04	<.8	.05	6.1	M	<.08	E3.0	2.7	<.01	1.2	
DATE				NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)				
MAY 30...				.48	<.3	<1.0	20.7	<8.0	2	.04				
AUG 15...				<.06	E.2	<1.0	180	<8.0	<1	.14				

E -- Estimated value.

M -- Presence verified, not quantified.

## GREEN RIVER BASIN

09255000 SLATER FORK NEAR SLATER, CO

LOCATION.--Lat 40°58'57", long 107°22'56", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi<sup>2</sup>.

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313.

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,600 ft above sea level, from river-profile map. May 28, 1910 to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931 to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Station operated and record provided by the Colorado District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	21	22	e22	e23	22	35	504	190	11	4.4	6.7
2	11	22	21	e23	e23	e22	46	476	185	10	4.5	7.4
3	9.1	15	20	e23	e23	e21	72	261	183	8.3	3.5	7.2
4	8.8	19	19	e23	e24	e21	94	222	146	5.7	3.6	7.0
5	8.7	25	18	e22	e24	e21	104	288	115	5.7	4.7	6.2
6	9.0	21	19	e22	e24	e21	124	277	96	3.2	4.5	5.1
7	9.4	14	19	e23	e24	e20	85	271	93	3.8	4.5	6.0
8	9.9	19	19	e23	e23	e20	69	335	94	6.8	6.4	7.8
9	12	24	20	e24	e23	e20	61	404	95	8.3	7.2	10
10	15	21	19	e24	e23	e20	61	436	94	7.5	15	9.0
11	16	18	19	e23	e24	e21	55	477	84	14	16	7.9
12	18	15	18	e22	e24	e22	48	434	70	14	11	6.7
13	18	19	19	e23	e24	23	50	453	68	13	8.2	5.3
14	18	19	20	e23	e24	17	49	499	59	13	8.4	6.0
15	18	22	19	e23	e23	23	42	520	51	24	11	7.0
16	18	22	18	e22	e23	21	63	535	43	19	11	6.5
17	18	19	e18	e22	e23	24	97	470	37	13	9.8	7.4
18	17	19	e19	e22	e22	22	149	377	35	9.2	8.1	9.0
19	17	20	e19	e23	e22	21	197	655	34	7.6	7.4	10
20	16	20	e20	e23	e21	24	221	447	29	6.6	6.6	9.1
21	16	20	e21	e23	e21	30	148	329	26	4.8	6.7	8.4
22	16	20	e22	e24	e20	37	129	250	24	4.6	7.2	7.8
23	16	21	e23	e24	e20	45	97	262	24	4.4	7.9	7.6
24	17	20	e22	e24	e19	47	90	283	21	3.8	7.1	7.8
25	19	21	e22	e23	e18	53	137	277	17	3.9	6.3	5.4
26	19	21	e22	e23	e17	64	218	283	17	4.7	4.9	4.4
27	19	20	e22	e23	e16	54	313	274	19	8.4	4.5	5.4
28	18	21	e23	e23	12	43	404	253	18	6.8	4.1	5.8
29	19	20	e23	e23	---	39	485	259	15	5.0	3.3	4.4
30	19	21	e22	e22	---	34	433	229	13	3.4	2.6	4.8
31	20	---	e22	e22	---	31	---	204	---	3.2	2.5	---
TOTAL	477.9	599	629	709	607	903	4176	11244	1995	256.7	212.9	209.1
MEAN	15.4	20.0	20.3	22.9	21.7	29.1	139	363	66.5	8.28	6.87	6.97
MAX	20	25	23	24	24	64	485	655	190	24	16	10
MIN	8.7	14	18	22	12	17	35	204	13	3.2	2.5	4.4
AC-FT	948	1190	1250	1410	1200	1790	8280	22300	3960	509	422	415

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

	MEAN	20.1	19.4	17.6	17.4	18.8	29.8	120	384	252	37.8	9.95	11.6
MAX	62.4	49.2	44.1	36.9	46.5	144	323	801	660	189	38.4	55.0	
(WY)	1986	1985	1985	1985	1986	1998	1985	1984	1995	1983	1945	1984	
MIN	7.29	7.73	7.30	4.42	9.82	12.6	25.2	45.7	23.6	1.27	1.39	3.20	
(WY)	1934	1934	1932	1992	1981	1965	1933	1934	1977	1977	1994	1960	

09255000 SLATER FORK NEAR SLATER, CO--Continued

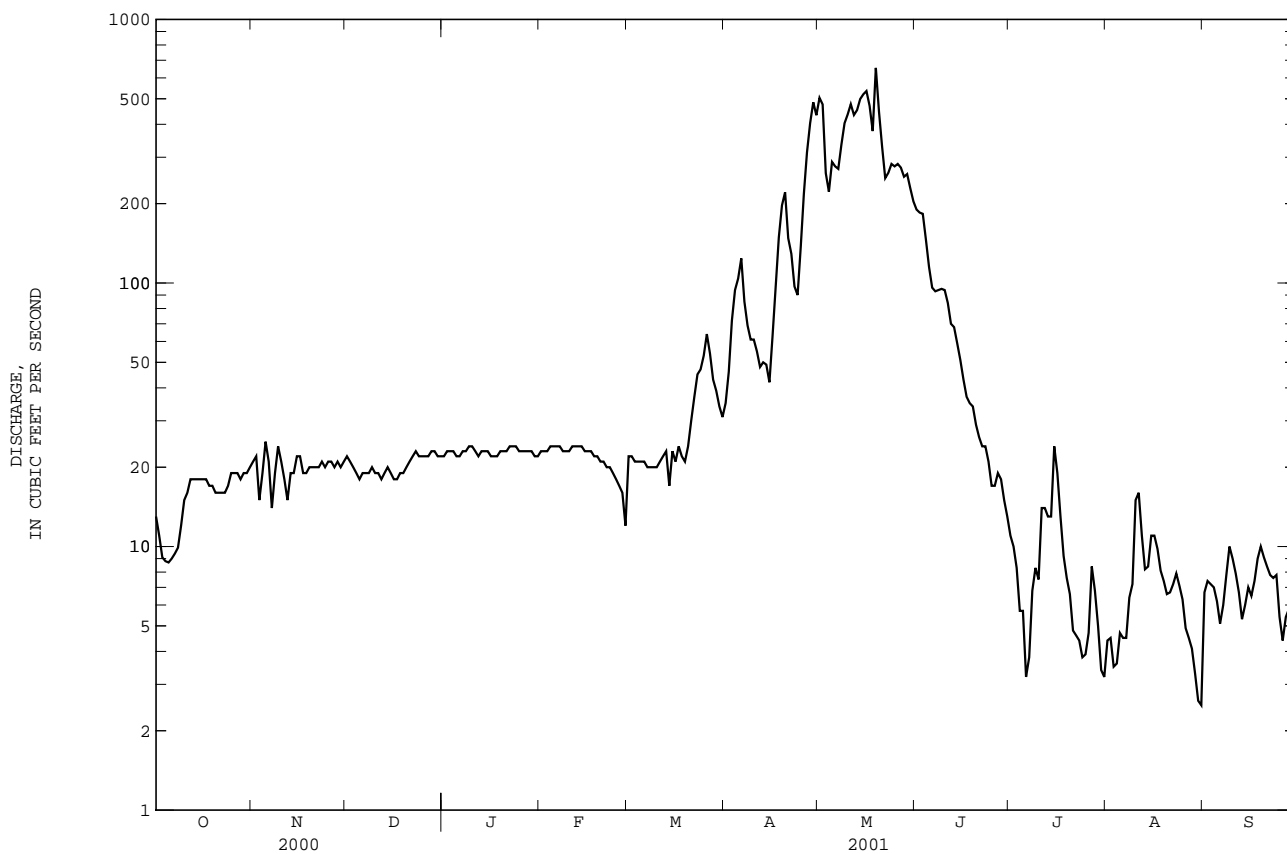
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1932 - 2001	
ANNUAL TOTAL	26582.2		22018.6		--	
ANNUAL MEAN	72.6		60.3		78.4	
HIGHEST ANNUAL MEAN	--		--		157	
LOWEST ANNUAL MEAN	--		--		20.5	
HIGHEST DAILY MEAN	559	May 5	655	May 19	1500	May 16 1984
LOWEST DAILY MEAN	1.3	Aug 15	2.5	Aug 31	.00 <sup>a</sup>	Aug 2 1934
ANNUAL SEVEN-DAY MINIMUM	2.0	Aug 2	3.9	Jul 30	.00 <sup>b</sup>	Aug 2 1934
MAXIMUM PEAK FLOW	--		869		2250 <sup>b</sup>	
MAXIMUM PEAK STAGE	--		8.03		11.78 <sup>c</sup>	
ANNUAL RUNOFF (AC-FT)	52730		43670		56780	
10 PERCENT EXCEEDS	279		210		258	
50 PERCENT EXCEEDS	22		21		20	
90 PERCENT EXCEEDS	4.4		6.1		7.1	

a Also occurred several days during years 1936, 1954, and 1977.

b From rating curve extended above 1000 ft<sup>3</sup>/s.

c From floodmark.

e Estimated.



## GREEN RIVER BASIN

09259050 LITTLE SNAKE RIVER BELOW BAGGS, WY

LOCATION.--Lat 41°01'43", long 107°41'14", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.7, T.12 N., R.92 W., Carbon County, Hydrologic Unit 14050003, 0.8 mi downstream from Ledford Slough, 1.5 mi southwest of Baggs, and 3.5 mi downstream from bridge on State Highway 789 in Baggs.

PERIOD OF RECORD.--Water years 1981 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SOLVED (MG/L) SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
APR 17...	1310	691	614	9.1	104	8.4	439	21.0	11.5	180	49.3	14.6	2.41
MAY 31...	1230	1280	613	8.2	99	8.0	127	22.0	14.0	53	14.9	3.88	1.12
JUN 28...	1000	11	615	9.8	141	8.4	453	22.5	22.5	180	46.9	14.7	2.35
AUG 15...	1710	14	612	8.8	136	8.5	493	24.0	26.0	160	40.2	14.5	3.39

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
APR 17...	.7	23.2	137	5.9	.2	15.2	86.5	.38	522	280	240	448
MAY 31...	.3	5.5	52	1.6	E.1	11.0	11.8	.11	279	81	71	245
JUN 28...	1	30.9	197	5.8	.3	16.3	37.3	.37	8.17	273	4	.12
AUG 15...	2	45.8	181	11.1	.4	9.8	60.5	.40	11.1	294	138	5.2

E -- Estimated value.



## BEAR RIVER BASIN

## 10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE

LOCATION.--Lat 40°57'55", long 11°051'10", in SE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec. 30, T. 3 N., R. 10 E., Summit County, Utah Hydrologic Unit 16010101, on left bank 400 ft downstream from West Fork and 2.8 mi upstream from Utah-Wyoming State line.

DRAINAGE AREA.--172 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1942 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 7,965 ft above sea level, from river-profile map. Prior to Oct. 1, 1986 at datum 3.0 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated slightly by Whitney Reservoir, total capacity, 4,700 acre-ft since 1966. Three diversions upstream from station for irrigation of about 265 acres upstream and 2,600 acres downstream from station. Station operated and record provided by Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	55	e40	43	e38	e33	49	440	532	113	64	68
2	55	46	e42	40	e40	e32	57	371	516	144	63	61
3	54	45	45	40	e44	e34	51	266	468	140	67	41
4	54	58	44	32	e46	e36	49	235	412	137	67	37
5	52	54	43	29	e44	e35	50	219	356	144	57	36
6	51	54	44	29	e45	e33	52	204	315	161	53	39
7	51	47	43	e28	e40	e32	49	221	320	173	52	37
8	51	60	43	e27	e35	e32	46	294	323	161	50	36
9	50	56	41	e28	e34	e36	44	408	325	171	50	36
10	52	50	41	29	e38	e35	49	526	332	159	62	34
11	82	48	47	31	e36	33	46	597	300	141	53	34
12	62	e52	45	28	e38	37	45	653	297	146	50	33
13	57	e52	43	29	e40	34	43	728	283	140	52	38
14	57	e46	43	28	e34	33	45	799	236	135	56	43
15	55	e49	43	e30	e36	40	44	848	196	141	50	36
16	54	e50	e40	e29	e34	37	55	1500	176	113	42	35
17	54	e52	e42	e30	e35	36	73	1290	170	91	39	48
18	56	46	e35	e31	e38	35	101	1020	168	82	37	52
19	55	52	e37	e35	e38	40	123	897	169	78	35	41
20	54	56	e38	e34	e36	42	120	866	164	82	34	37
21	59	51	39	e34	e36	44	95	757	159	79	52	36
22	57	46	40	e35	e37	47	90	677	157	76	55	35
23	55	47	42	e37	e36	51	81	742	151	74	47	34
24	56	44	40	e38	e35	52	85	812	151	76	41	34
25	55	41	42	e40	e33	54	114	807	151	74	39	34
26	53	37	e39	e39	e31	53	166	787	143	74	37	33
27	54	40	e36	e37	e32	51	214	744	137	72	35	33
28	56	45	34	e42	e31	50	295	668	130	69	41	34
29	55	45	42	e38	---	48	362	622	125	65	66	37
30	56	44	46	e40	---	45	373	611	116	65	71	39
31	59	---	43	e38	---	46	---	541	---	66	77	---
TOTAL	1728	1468	1282	1048	1040	1246	3066	20150	7478	3442	1594	1171
MEAN	55.7	48.9	41.4	33.8	37.1	40.2	102	650	249	111	51.4	39.0
MAX	82	60	47	43	46	54	373	1500	532	173	77	68
MIN	50	37	34	27	31	32	43	204	116	65	34	33
AC-FT	3430	2910	2540	2080	2060	2470	6080	39970	14830	6830	3160	2320

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2001, BY WATER YEAR (WY)

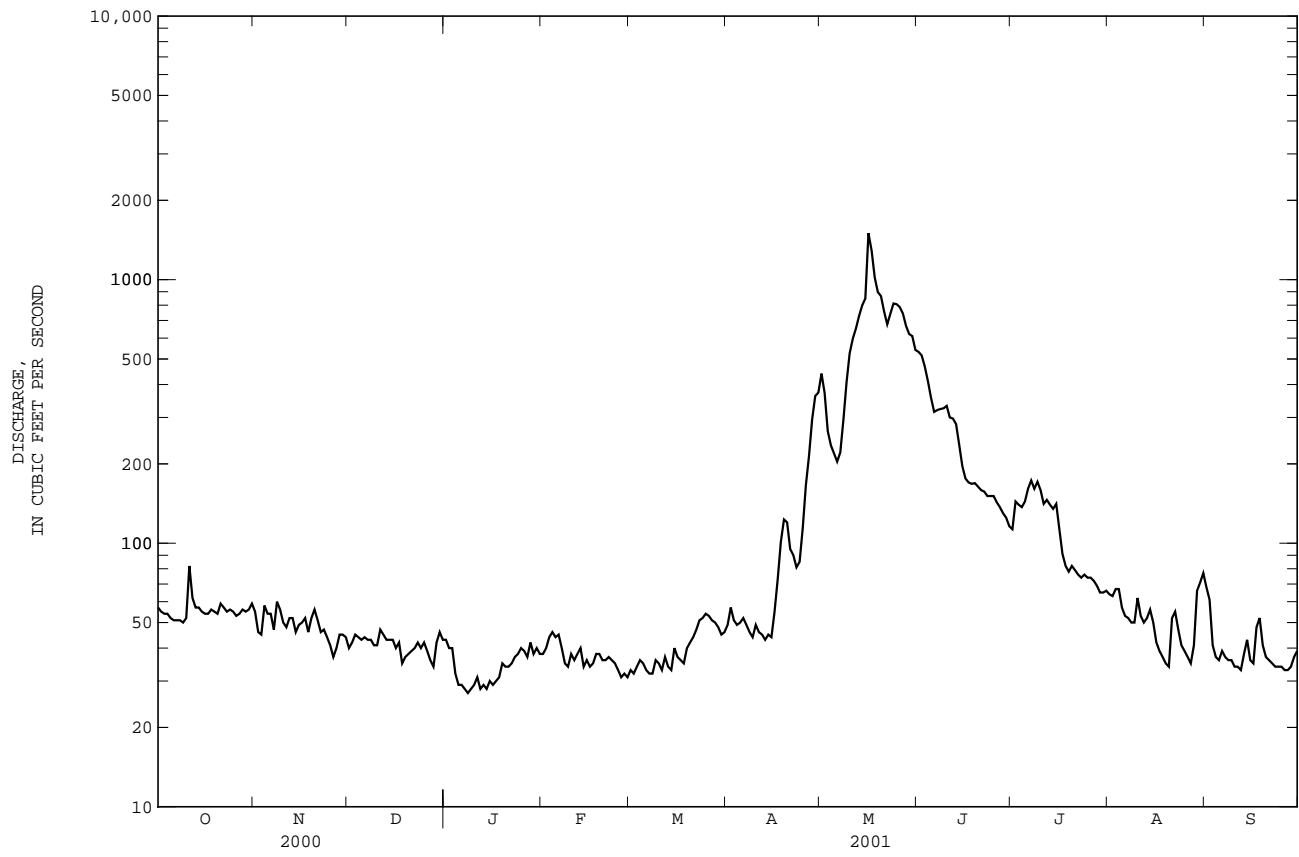
	MEAN	63.6	54.8	46.9	42.2	40.2	44.0	111	600	860	304	95.2	74.0
MAX	208	106	94.9	72.4	64.3	69.0	316	1044	1990	1105	244	229	
(WY)	1983	1984	1984	1984	1984	1986	1946	1984	1986	1995	1965	1983	
MIN	30.8	32.5	27.7	29.6	25.3	26.0	37.2	162	204	67.4	37.5	23.9	
(WY)	1959	1955	1960	1991	1964	1964	1944	1977	1992	1961	1954	1956	

BEAR RIVER BASIN

10011500 BEAR RIVER NEAR UTAH-WYOMING STATE LINE--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1943 - 2001	
ANNUAL TOTAL	49020		44713		--	
ANNUAL MEAN	134		123		195	
HIGHEST ANNUAL MEAN	--		--		335	1986
LOWEST ANNUAL MEAN	--		--		81.5	1977
HIGHEST DAILY MEAN	1240	May 26	1500	May 16	2680	Jun 4 1986
LOWEST DAILY MEAN	34	Dec 28	27	Jan 8	18	Jan 3 1960
ANNUAL SEVEN-DAY MINIMUM	39	Dec 16	29	Jan 6	21	Dec 28 1959
MAXIMUM PEAK FLOW	--		1790	May 16	3230	Jun 6 1986
MAXIMUM PEAK STAGE	--		6.50	May 16	4.05 <sup>a</sup>	Jun 6 1986
ANNUAL RUNOFF (AC-FT)	97230		88690		141200	
10 PERCENT EXCEEDS	337		317		608	
50 PERCENT EXCEEDS	55		50		59	
90 PERCENT EXCEEDS	43		34		34	

a Datum then in use.  
e Estimated.



REMARKS.--Records good except those for estimated discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas.

MEAN	---	---	---	---	---	312	833	805	212	68.5	58.0
MAX	---	---	---	---	---	602	2469	1890	980	181	225
(WY)	---	---	---	---	---	1985	1984	1986	1995	1984	1984
MIN	---	---	---	---	---	133	330	121	31.9	16.4	11.8
(WY)	---	---	---	---	---	1995	1990	1992	2000	1988	1988

## BEAR RIVER BASIN

10016900 BEAR RIVER AT EVANSTON, WY--Continued

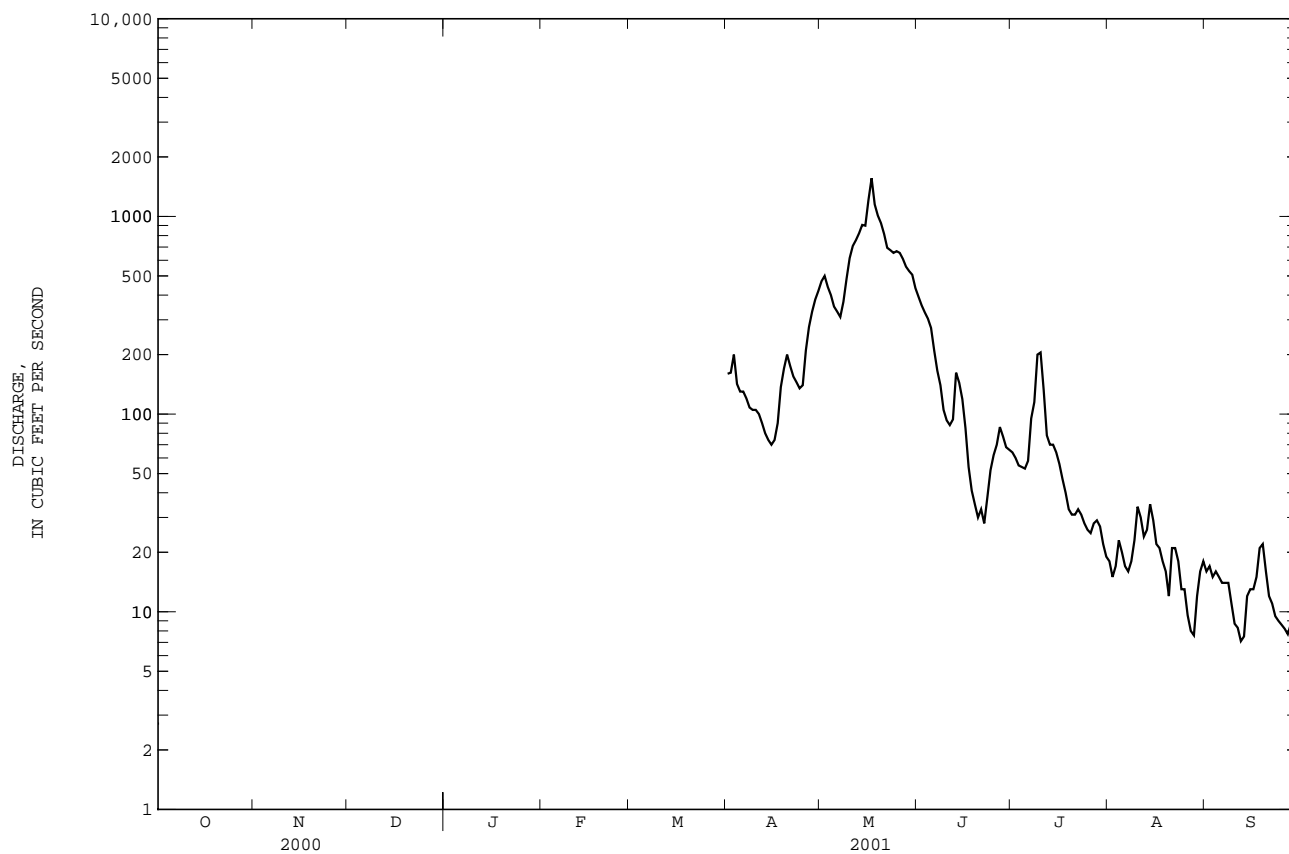
## SUMMARY STATISTICS

## FOR 2001 WATER YEAR\*

## WATER YEARS 1984 - 2001\*

HIGHEST DAILY MEAN	1560	May 17	3160	May 16 1984
LOWEST DAILY MEAN	7.1	Sep 12	3.8	Sep 30 1992
ANNUAL SEVEN-DAY MINIMUM	8.6	Sep 23	5.3	Aug 18 1988
MAXIMUM PEAK FLOW	1830	May 17	3680	May 16 1984
MAXIMUM PEAK STAGE	5.23	May 17	7.35	May 16 1984

\* For period of operation.  
e Estimated.



## 10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°26'04", long 111°01'01", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec. 29, T. 17 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 9.3 mi upstream from Woodruff Narrows Dam and 10 mi southeast of Woodruff.

DRAINAGE AREA.--752 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,455 ft above sea level, from river-profile map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	65	e35	e26	e39	e46	127	426	306	25	2.5	.15
2	6.6	67	e32	e26	e40	e48	138	487	264	22	2.5	.35
3	5.8	57	e29	e26	e38	e53	292	441	264	21	2.5	.63
4	5.5	44	e28	e25	e36	e56	192	336	254	19	2.8	.78
5	5.4	43	e30	e26	e36	e56	171	295	259	18	2.8	.90
6	5.5	52	e34	e26	e35	e56	212	277	227	15	1.8	1.1
7	5.4	52	e36	e26	e37	e54	214	232	159	14	.80	1.3
8	5.5	50	e37	e26	e38	e55	175	237	110	18	.53	1.5
9	5.6	48	e35	e29	e38	e56	158	318	84	40	.34	1.8
10	7.1	65	e33	e29	e36	e53	157	444	69	136	.31	1.8
11	11	64	e31	e30	e35	e52	155	565	72	94	.31	1.8
12	15	55	e31	e33	e36	e51	152	638	e66	59	.30	1.8
13	22	53	e32	e34	e38	e52	150	701	e84	41	.27	1.8
14	15	e53	e35	e34	e40	e52	142	786	122	39	.30	1.6
15	12	e57	e38	e33	e44	e56	119	799	104	34	.26	1.6
16	13	e59	e40	e31	e47	e62	79	891	84	30	.31	1.6
17	10	e53	e41	e30	e48	e69	76	e1400	63	28	.31	1.5
18	11	e51	e40	e29	e49	e68	100	1180	48	25	.34	1.7
19	10	e50	e35	e28	e48	e80	133	1030	38	22	.28	2.0
20	8.4	e45	e32	e29	e45	e100	160	879	34	17	.18	1.8
21	8.7	e42	e30	e30	e45	e130	155	788	31	13	.31	1.6
22	34	e40	e30	e31	e44	e170	135	672	29	11	.63	1.4
23	45	e38	e31	e33	e44	e200	132	605	28	8.7	.81	1.4
24	45	e38	e32	e34	e46	e260	109	525	26	7.1	.51	1.4
25	52	e39	e32	e33	e47	e350	97	545	24	6.5	.29	1.4
26	57	e40	e31	e32	e45	e400	125	567	22	6.3	.19	1.3
27	56	e42	e29	e30	e46	e420	177	537	27	5.0	.14	1.3
28	52	e43	e28	e29	e46	253	219	474	38	2.8	.13	1.4
29	53	e41	e27	e29	---	183	315	461	30	3.3	.15	1.2
30	60	e38	e27	e32	---	158	378	404	27	3.0	.13	1.3
31	62	---	e27	e36	---	135	---	366	---	2.8	.11	---
TOTAL	712.0	1484	1008	925	1166	3834	4944	18306	2993	786.5	23.14	41.21
MEAN	23.0	49.5	32.5	29.8	41.6	124	165	591	99.8	25.4	.75	1.37
MAX	62	67	41	36	49	420	378	1400	306	136	2.8	2.0
MIN	5.4	38	27	25	35	46	76	232	22	2.8	.11	.15
AC-FT	1410	2940	2000	1830	2310	7600	9810	36310	5940	1560	46	82

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

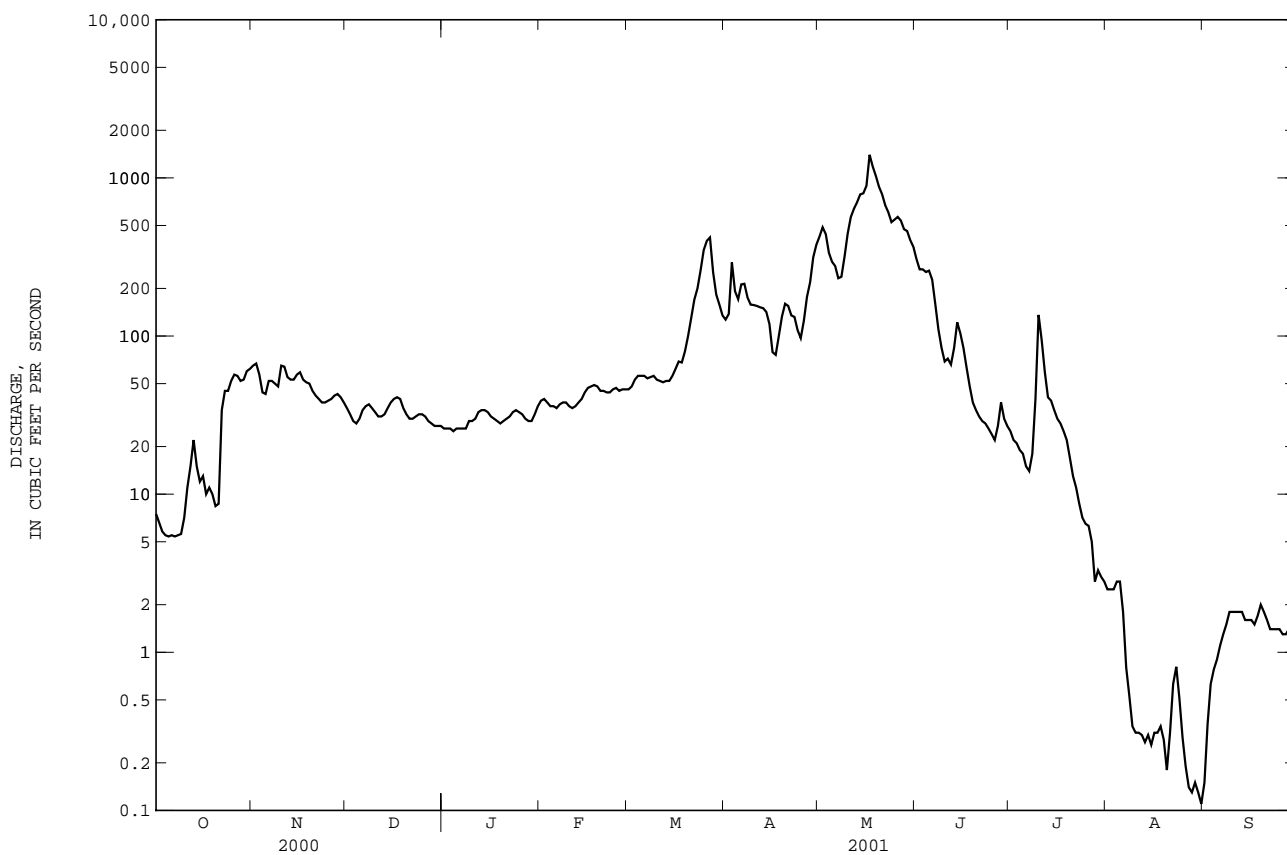
	MEAN	74.5	73.9	72.6	68.8	84.4	167	341	812	858	201	50.4	49.6
MAX	437	198	181	147	312	627	671	1957	2564	1191	340	288	
(WY)	1983	1974	1984	1984	1986	1986	1969	1984	1986	1995	1983	1983	
MIN	3.03	6.06	7.21	6.76	13.8	26.8	77.7	104	54.6	4.41	.68	.49	
(WY)	1965	1989	1989	1989	1993	1977	1977	1977	1992	2000	2000	1988	

## BEAR RIVER BASIN

10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1962 - 2001	
ANNUAL TOTAL	38182.14		36222.85		--	
ANNUAL MEAN	104		99.2		238	
HIGHEST ANNUAL MEAN	--		--		583	
LOWEST ANNUAL MEAN	--		--		45.1	
HIGHEST DAILY MEAN	1210	May 27	1400	May 17	3900	Jun 2 1983
LOWEST DAILY MEAN	.04	Aug 21, 22	.11	Aug 31	.00	Many days 1988
ANNUAL SEVEN-DAY MINIMUM	.06	Aug 18	.14	Aug 26	.00	Aug 30 1988
MAXIMUM PEAK FLOW	--		1560		4150	
MAXIMUM PEAK STAGE	--		4.70		6.17	
ANNUAL RUNOFF (AC-FT)	75730		71850		172400	
10 PERCENT EXCEEDS	254		269		700	
50 PERCENT EXCEEDS	52		37		85	
90 PERCENT EXCEEDS	1.5		1.4		9.5	

e Estimated.



10020100 BEAR RIVER ABOVE RESERVOIR, NEAR WOODRUFF, UT--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1969 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
OCT 25...	0835	63	603	8.8	90	8.3	420	8.0	6.0	190	45.1	17.8	1.98
MAR 27...	1120	420	605	9.2	89	8.1	468	3.0	4.0	220	50.7	21.5	3.94
JUN 21...	1435	55	--	--	--	8.4	575	26.0	21.0	260	54.3	29.4	2.84
AUG 15...	1440	.48	610	8.8	117	8.8	682	21.0	18.0	230	32.9	36.7	7.16

DATE	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA- LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)
OCT 25...	.5	15.4	184	--	18.7	E.1	5.6	18.1	.32	39.7	233	<.041	<.047
MAR 27...	.4	14.5	--	189	23.2	.2	10.1	29.7	.36	304	268	.049	.165
JUN 21...	.6	23.4	--	248	29.9	.3	11.2	20.5	.44	47.8	321	<.040	<.050
AUG 15...	1	51.2	--	215	73.5	.4	19.9	32.8	.52	.50	384	E.030	E.025

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 25...	<.006	<.018	37	6.3
MAR 27...	E.004	.029	324	367
JUN 21...	<.006	<.020	4	.60
AUG 15...	<.006	<.020	2	.00

E -- Estimated value.

## BEAR RIVER BASIN

## 10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT

LOCATION.--Lat 41°30'20", long 111°00'50", in NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  sec. 32, T. 18 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 1,100 ft downstream from Woodruff Narrows Dam, 1.6 mi upstream from Salt Creek, 5.4 mi upstream from Wyoming-Utah State line, and 7.7 mi east of Woodruff.

DRAINAGE AREA.--784 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,398.96 ft above sea level (levels by Utah Water Resources Division from Bureau of Reclamation bench mark). Prior to Sept. 26, 1962, at site 175 ft upstream at same datum.

REMARKS.--Records good except those for estimated discharges, which are fair. Flow regulated by Woodruff Narrows Reservoir (station 10020200) beginning January 1962. Diversions for irrigation of about 43,500 acres upstream from station. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	23	26	28	30	30	24	22	1160	59	18	8.3
2	161	23	26	28	30	30	24	23	1140	59	18	8.2
3	76	23	26	28	30	29	24	23	1120	58	18	7.6
4	21	23	26	28	29	29	23	24	1100	58	18	7.2
5	13	23	26	29	29	29	24	24	1070	57	18	6.9
6	13	23	26	28	30	29	24	24	1050	57	17	6.2
7	14	23	26	28	30	29	24	24	1020	57	17	6.7
8	14	23	26	29	30	30	25	24	988	57	17	13
9	14	24	26	29	30	30	25	24	881	57	17	18
10	15	24	27	28	30	30	25	24	792	57	16	18
11	14	25	27	29	30	30	25	25	767	57	17	17
12	14	25	27	29	30	30	25	25	752	58	16	17
13	14	25	27	29	30	30	26	26	731	58	17	17
14	14	25	27	29	30	29	26	26	702	38	16	17
15	14	25	27	29	30	29	26	26	337	25	16	16
16	14	25	27	29	30	29	26	26	70	25	15	13
17	14	25	27	29	30	29	26	27	69	24	13	13
18	45	25	27	29	30	30	26	27	61	22	11	13
19	28	25	27	29	30	30	23	27	48	22	9.9	13
20	35	25	28	29	30	31	22	728	47	21	9.3	13
21	23	25	28	29	30	31	22	1140	46	21	9.1	13
22	23	25	28	29	30	31	22	1140	46	21	9.0	13
23	24	26	28	29	30	32	22	1140	46	21	9.0	12
24	24	26	28	29	30	33	22	1140	46	20	8.6	12
25	24	26	28	29	30	36	22	1200	45	20	8.3	12
26	23	26	28	29	30	37	22	1250	43	20	8.1	12
27	21	26	28	29	30	39	22	1230	43	20	8.2	11
28	22	26	28	30	30	29	22	1220	42	19	8.3	8.9
29	22	26	28	30	---	23	22	1200	42	19	8.3	7.7
30	22	25	28	30	---	23	22	1190	52	19	8.3	5.1
31	22	---	28	30	---	23	---	1180	---	19	8.4	---
TOTAL	983	739	840	896	838	929	713	14229	14356	1145	407.8	355.8
MEAN	31.7	24.6	27.1	28.9	29.9	30.0	23.8	459	479	36.9	13.2	11.9
MAX	186	26	28	30	30	39	26	1250	1160	59	18	18
MIN	13	23	26	28	29	23	22	22	42	19	8.1	5.1
AC-FT	1950	1470	1670	1780	1660	1840	1410	28220	28480	2270	809	706

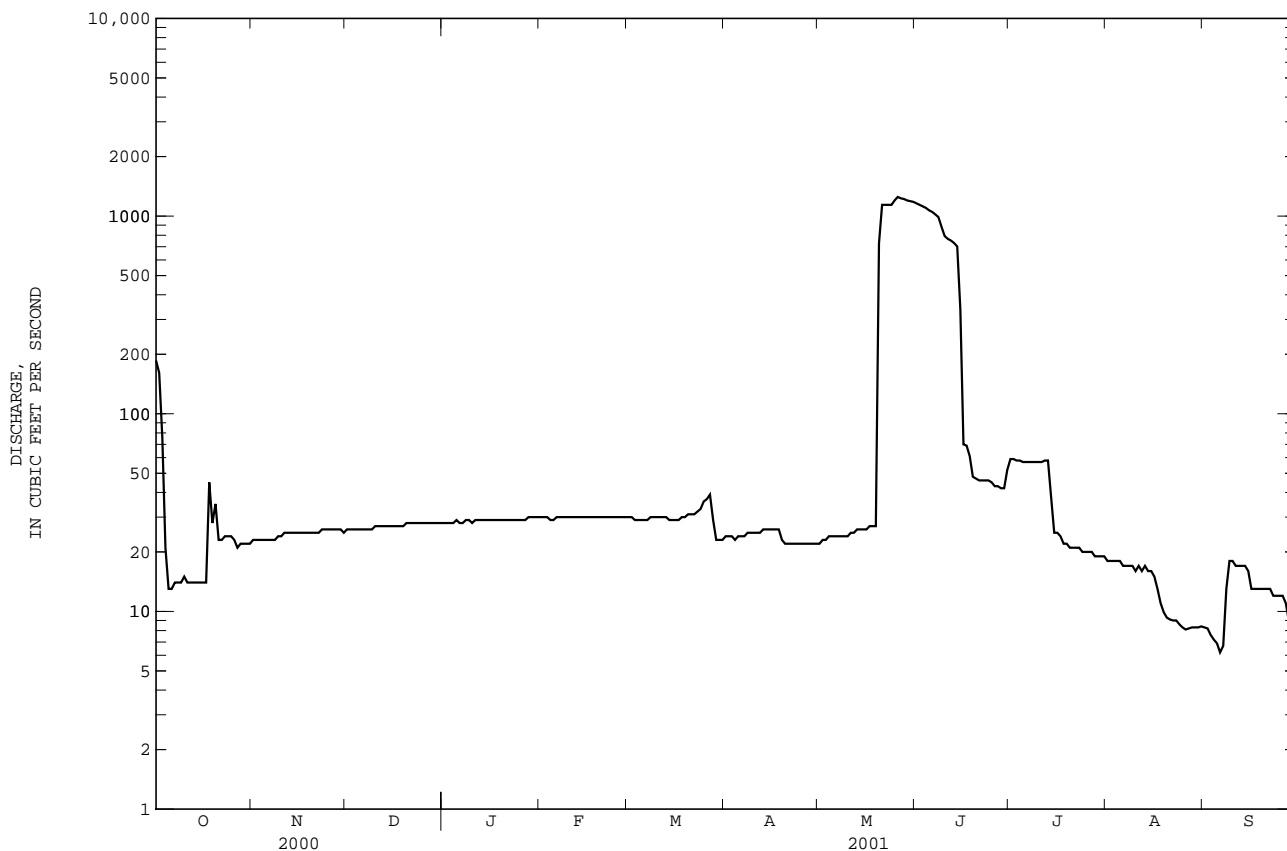
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

MEAN	60.1	55.5	48.1	45.8	48.7	99.1	286	791	996	294	80.2	62.0
MAX	425	421	184	153	171	473	891	1828	2437	913	331	278
(WY)	1983	1983	1983	1985	1971	1972	1985	1984	1983	1975	1983	1983
MIN	3.89	.12	4.28	4.37	4.71	4.70	.34	27.8	396	20.0	3.91	3.65
(WY)	1990	1981	1978	1978	1978	1978	1977	1977	1977	1966	1979	1979



## 10020300 BEAR RIVER BELOW RESERVOIR, NEAR WOODRUFF, UT--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1962 - 2001	
ANNUAL TOTAL	61178		36431.6		--	
ANNUAL MEAN	167		99.8		239	
HIGHEST ANNUAL MEAN	--		--		509	1983
LOWEST ANNUAL MEAN	--		--		44.3	1977
HIGHEST DAILY MEAN	2330	May 18	1250	May 26	3630	Jun 3 1983
LOWEST DAILY MEAN	12	Sep 14-16	5.1	Sep 30	.00	Several days, 1962,1979,1980
ANNUAL SEVEN-DAY MINIMUM	14	Oct 5	7.3	Sep 1	.07	Nov 26 1980
MAXIMUM PEAK FLOW	--		1250	May 26	3820	Jun 2 1983
MAXIMUM PEAK STAGE	--		--		8.26	Jun 2 1983
ANNUAL RUNOFF (AC-FT)	121300		72260		173200	
10 PERCENT EXCEEDS	651		58		804	
50 PERCENT EXCEEDS	26		26		42	
90 PERCENT EXCEEDS	17		13		9.7	



## BEAR RIVER BASIN

10027000 TWIN CREEK AT SAGE, WY

LOCATION.--Lat 41°48'36", long 110°58'12", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.7, T.21 N., R.119 W., Lincoln County, Hydrologic Unit 16010101, 0.5 mi downstream from Bulldog Hollow, 0.5 mi southwest of Sage, 0.8 mi southeast of junction of U.S. Highway 30 and State Highway 89, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--246 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1975 to 1981, October 1989 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT 24...	1155	6.8	609	10.2	103	8.4	925	12.0	6.0	380	86.1	40.6	3.38	
MAR 27...	0830	42	609	10.2	93	8.1	952	.00	2.0	360	75.9	41.2	4.67	
MAY 08...	1100	6.3	613	9.2	101	8.4	1010	19.5	9.5	410	84.4	49.2	3.17	
JUN 20...	1200	4.4	--	--	--	8.2	835	22.0	15.0	330	65.7	41.0	2.52	
AUG 15...	1145	3.0	613	8.2	107	8.3	685	21.0	17.5	260	45.9	35.9	2.86	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT 24...	1	50.0	215	--	35.5	.4	9.1	245	.81	10.9	599	<.041	<.047	
MAR 27...	2	66.3	--	183	37.0	.3	9.6	273	.84	70.6	618	<.041	.113	
MAY 08...	1	62.1	--	230	35.3	.4	9.3	281	.90	11.4	663	<.041	<.047	
JUN 20...	1	46.0	--	157	31.9	.4	7.8	228	.70	6.09	517	<.040	<.050	
AUG 15...	1.0	37.0	--	118	28.2	.3	4.0	186	.56	3.28	410	E.032	E.029	
				DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)						
				OCT 24...	<.006	<.018	79	1.4						
				MAR 27...	E.006	.051	809	92						
				MAY 08...	<.006	<.018	107	1.8						
				JUN 20...	<.006	<.020	40	.47						
				AUG 15...	<.006	<.020	6	.05						

E -- Estimated value.

## 10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY

LOCATION.--Lat 41°56'20", long 110°59'05", in SE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec. 25, T. 23 N., R. 120 W., Lincoln County, Hydrologic Unit 16010102, 800 ft downstream from Pixley Dam, 11 mi south of Cokeville, and 17.5 mi downstream from Twin Creek.

DRAINAGE AREA.--2,032 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1941 to November 1943 (published as Bear River near Cokeville), October 1952 to September 1956, May 1958 to current year (seasonal only). Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,185 ft above sea level, from river-profile map. Oct. 31, 1941 to Nov. 30, 1943, at site 200 ft downstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by diversions for irrigation, return flow from irrigated areas, and regulation by upstream reservoirs. Station operated and record provided by the Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	143	31	4.5	14	12	1.8
2	---	---	---	---	---	---	90	32	5.1	14	11	4.2
3	---	---	---	---	---	---	72	33	4.5	13	11	6.9
4	---	---	---	---	---	---	70	31	5.6	12	11	9.0
5	---	---	---	---	---	---	76	30	5.7	10	9.9	11
6	---	---	---	---	---	---	80	29	5.2	74	9.6	13
7	---	---	---	---	---	---	81	29	5.8	53	9.0	11
8	---	---	---	---	---	---	81	18	6.8	41	8.2	8.6
9	---	---	---	---	---	---	87	5.5	8.9	39	8.7	14
10	---	---	---	---	---	---	88	5.6	9.6	39	7.5	21
11	---	---	---	---	---	---	85	5.8	9.5	38	6.7	26
12	---	---	---	---	---	---	85	4.9	7.6	38	6.8	16
13	---	---	---	---	---	---	82	4.1	7.4	38	6.5	22
14	---	---	---	---	---	---	79	4.3	8.7	35	6.1	27
15	---	---	---	---	---	---	74	4.3	11	32	5.8	36
16	---	---	---	---	---	---	69	5.6	17	31	5.7	39
17	---	---	---	---	---	---	63	6.4	36	66	5.4	38
18	---	---	---	---	---	---	56	6.6	40	50	5.2	37
19	---	---	---	---	---	---	52	6.5	39	35	5.0	41
20	---	---	---	---	---	---	49	6.3	37	31	5.0	42
21	---	---	---	---	---	---	50	6.0	31	28	5.9	41
22	---	---	---	---	---	---	51	5.7	27	25	3.3	38
23	---	---	---	---	---	---	47	5.2	22	23	.21	12
24	---	---	---	---	---	---	40	4.9	17	20	.36	13
25	---	---	---	---	---	---	40	4.4	15	18	2.2	22
26	---	---	---	---	---	---	39	4.1	14	17	3.2	24
27	---	---	---	---	---	---	38	4.0	13	16	3.1	26
28	---	---	---	---	---	---	36	4.0	14	16	2.5	27
29	---	---	---	---	---	---	35	3.7	14	14	.36	27
30	---	---	---	---	---	---	33	3.7	15	13	.48	25
31	---	---	---	---	---	---	---	4.0	---	12	1.4	---
TOTAL	---	---	---	---	---	---	1971	348.6	456.9	905	179.11	679.5
MEAN	---	---	---	---	---	---	65.7	11.2	15.2	29.2	5.78	22.6
MAX	---	---	---	---	---	---	143	33	40	74	12	42
MIN	---	---	---	---	---	---	33	3.7	4.5	10	.21	1.8
AC-FT	---	---	---	---	---	---	3910	691	906	1800	355	1350

## BEAR RIVER BASIN

10028500 BEAR RIVER BELOW PIXLEY DAM, NEAR COKEVILLE, WY--Continued

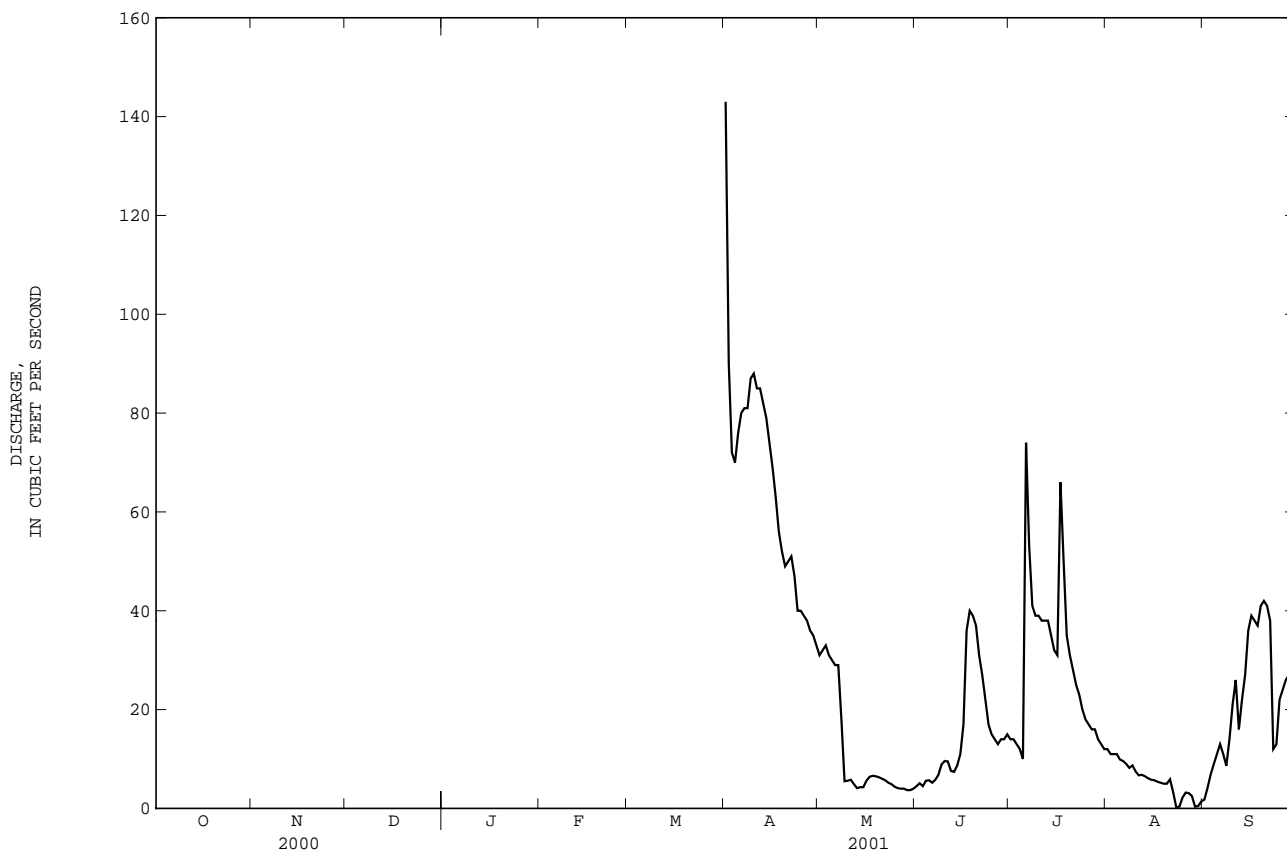
## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

WATER YEARS 1966-2001\*

HIGHEST DAILY MEAN	143	Apr 1	2040	Jun 5 1983
LOWEST DAILY MEAN	.21	Apr 23	.56	May 12 1977
MAXIMUM PEAK FLOW	179	Jul 17	2300	Mar 25 1956
MAXIMUM PEAK STAGE	2.95	Jul 17	--	

\* For period of operation.



LOCATION.--Lat 42°17'36", long 110°51'18", in NE<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.28, T.27 N., Lincoln County, Hydrologic Unit 16010102, on left bank 4.9 mi upstream from Howland Creek, 5.6 mi downstream from Hobble Creek, and 12.4 mi northeast of Border.

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above sea level, from topographic map. Prior to October 16, 1945, at site 1.2 mi downstream at different datum. October 16, 1945 to November 1986 at site 0.4 mi down-stream at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. One diversion for irrigation of about 200 acres above station. Station operated and record provided by the Utah District.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	80	e72	e53	e52	61	86	215	254	121	78	e66
2	85	76	e70	e53	e53	75	99	201	249	119	80	e67
3	84	72	e70	e53	e54	53	86	185	246	116	81	e65
4	84	74	e70	e53	e55	50	82	167	238	115	100	e63
5	84	75	e70	e54	e57	51	89	167	263	112	88	e63
6	83	73	e70	e55	e57	50	91	166	207	113	83	e64
7	83	e72	e70	e54	e57	50	84	168	197	113	81	e67
8	84	e71	e70	e54	e55	51	86	190	191	115	80	e70
9	82	e72	e70	e55	e53	51	77	217	190	114	78	e74
10	85	e73	e70	e57	e51	52	78	221	197	114	79	e72
11	92	e70	e69	e58	e51	53	80	244	198	111	79	e70
12	88	e67	e56	e52	e52	52	81	251	200	114	77	e68
13	92	e75	e65	e54	e52	52	79	274	218	107	77	e67
14	90	e74	e63	e54	e52	51	80	302	224	105	79	e68
15	85	e72	e60	e53	e51	52	77	321	203	103	76	e68
16	83	e69	e58	e53	e50	52	82	379	188	104	76	e67
17	82	e68	e62	e52	e51	49	93	403	181	98	74	e68
18	82	e70	e62	e53	e52	52	123	372	178	98	72	e72
19	81	e70	e61	e53	52	51	147	341	173	97	70	e70
20	81	e70	e59	e53	53	55	133	330	167	96	70	e67
21	81	e70	e59	e54	53	63	122	311	160	92	74	e67
22	80	e70	e59	e54	53	66	112	286	154	89	e77	e67
23	78	e70	e59	e54	52	70	114	277	156	89	e73	e66
24	79	e70	e59	e55	50	76	113	280	153	89	e68	e65
25	84	e71	e60	e56	49	79	137	290	137	89	e67	e62
26	83	e70	e59	e58	49	81	e140	298	134	89	e68	e61
27	79	e69	e58	e56	45	74	167	298	133	90	e67	e61
28	77	e72	e56	e55	49	76	192	290	130	84	e65	e62
29	76	e72	e55	e54	---	77	222	281	125	82	e63	e63
30	80	e74	e54	e53	---	78	215	271	123	80	e61	e63
31	83	---	e54	e53	---	77	---	263	---	79	e63	---
TOTAL	2575	2157	1960	1682	1460	1880	3367	8259	5567	3137	2324	1993
MEAN	83.1	71.9	63.2	54.3	52.1	60.6	112	266	186	101	75.0	66.4
MAX	92	80	72	58	57	81	222	403	263	121	100	74
MIN	76	68	54	52	45	49	77	166	123	79	61	61
AC-FT	5110	4280	3890	3340	2900	3730	6680	16380	11040	6220	4610	3950

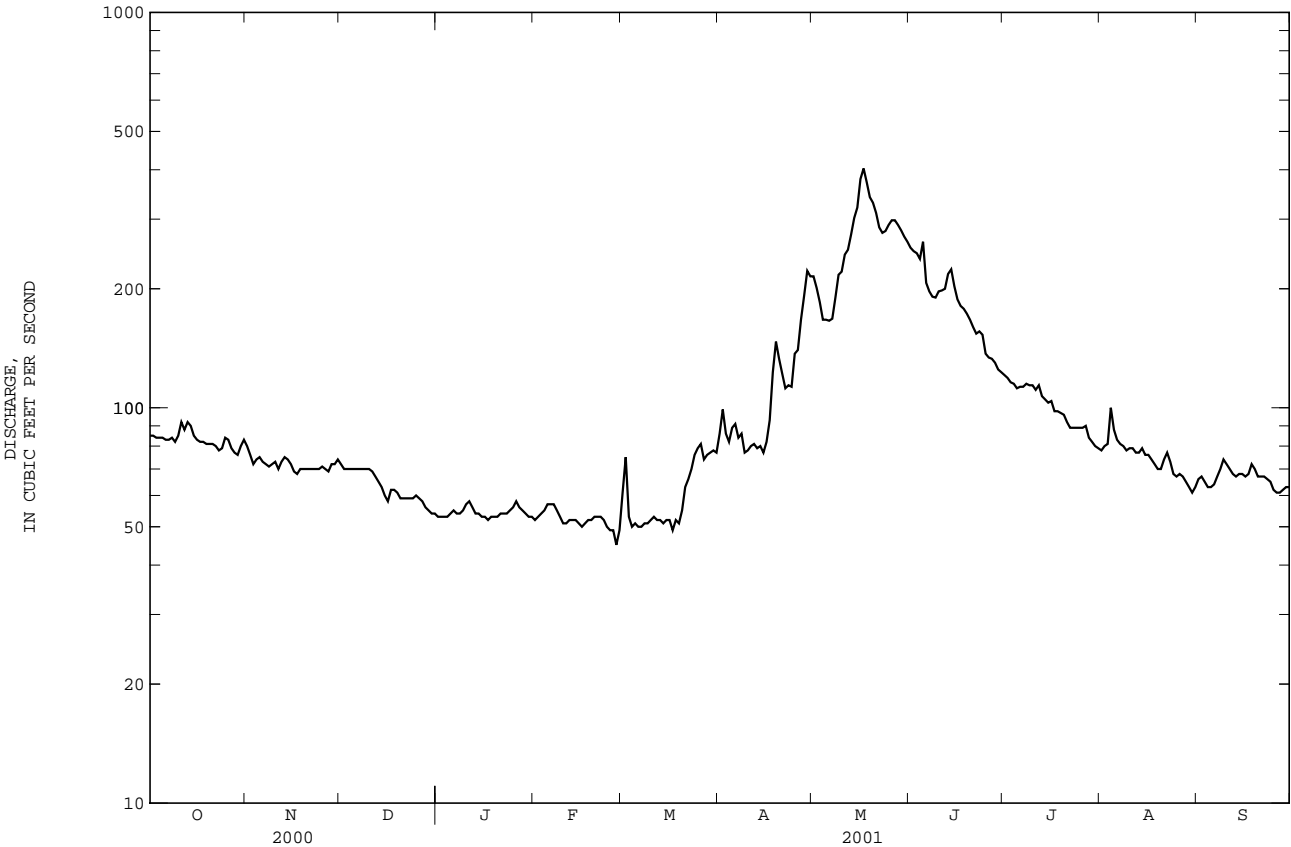
MEAN	91.5	78.7	69.7	64.0	61.5	63.1	160	544	633	296	153	109
MAX	156	113	88.4	85.0	82.8	99.4	385	1072	1377	602	242	166
(WY)	1987	1986	1983	1983	1984	1986	1946	1997	1986	1975	1983	1986
MIN	51.0	50.7	45.3	40.1	38.1	39.5	58.6	99.1	96.2	61.4	55.1	52.1
(WY)	1978	1978	1995	1988	1988	1988	1975	1977	1977	1977	1977	1977

BEAR RIVER BASIN

10032000 SMITHS FORK NEAR BORDER, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1943 - 2001	
ANNUAL TOTAL	52324		36361		--	
ANNUAL MEAN	143		99.6		194	
HIGHEST ANNUAL MEAN	--		--		324	
LOWEST ANNUAL MEAN	--		--		71.1	
HIGHEST DAILY MEAN	613	May 25	403	May 17	2000	Jun 4 1986
LOWEST DAILY MEAN	54	Dec 30,31	45	Feb 27	32	Dec 6 1993
ANNUAL SEVEN-DAY MINIMUM	57	Dec 25	50	Feb 22	35	Dec 1 1993
MAXIMUM PEAK FLOW	--		424		2100	
MAXIMUM PEAK STAGE	--		2.24		5.86 <sup>a</sup>	
ANNUAL RUNOFF (AC-FT)	103800		72120	May 17	140600	Jun 4 1986
10 PERCENT EXCEEDS	342		200		519	
50 PERCENT EXCEEDS	85		74		91	
90 PERCENT EXCEEDS	65		53		59	

a Site and datum then in use.  
e Estimated.



10035000 SMITHS FORK AT COKEVILLE, WY

LOCATION.--Lat 42°05'47", long 110°56'24", in NE<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.4, T.24 N., R.119 W., Lincoln County, Hydrologic Unit 16010102, 900 ft upstream from U.S. Highway 30N, 1 mi northeast of Cokeville, and 2 mi upstream from mouth.

DRAINAGE AREA.--275 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1983-88, 1989-1992, October 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	
OCT 24...	1435	77	605	10.2	109	8.4	387	10.0	8.0	<.041	<.047	<.006	<.018
MAY 08...	0850	185	613	9.2	94	8.3	353	13.5	7.0	<.041	<.047	<.006	<.018
JUN 20...	0925	136	--	--	--	8.2	361	15.0	10.5	<.040	E.024	<.006	<.020
AUG 15...	0845	64	611	7.6	92	7.7	371	20.5	14.0	E.030	E.023	<.006	<.020

DATE	SEDI- MENT, DIS- SOLVED SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- SOLVED SUS- PENDED (T/DAY) (80155)
OCT 24...	35	7.3
MAY 08...	80	40
JUN 20...	41	15
AUG 15...	11	1.9

E -- Estimated value.

## BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY

LOCATION.--Lat 42°07'36", long 110°58'21", in NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 28, T.25 N., R.119 W., Lincoln County, Hydrologic Unit 16010102, on left bank 1.1 mi upstream from Wyman Dam, 2.8 mi northwest of Cokeville, and 3.8 mi downstream from Smiths Fork.

DRAINAGE AREA.--2,447 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1954 to September 1996, October 1996 to current year. (seasonal).

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 6,140 ft above sea level, from river-profile map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by diversion for irrigation, return flow from irrigated areas, and regulation by upstream reservoirs. Station operated and record provided by Utah District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	e190	e160	e140	e140	e120	327	192	201	161	99	e70
2	239	e190	e160	e140	e140	127	302	181	197	154	99	76
3	241	e190	e160	e140	e143	e130	233	177	196	145	113	74
4	246	e190	e160	e140	e141	e130	208	166	197	140	141	73
5	248	e190	e160	e140	e146	e130	203	165	196	139	127	71
6	237	e190	e150	e150	e150	e130	205	164	e190	131	117	73
7	219	e180	e150	e160	e146	e130	214	164	e180	123	110	82
8	197	e170	e150	e160	e140	e130	215	183	174	189	101	86
9	185	e160	e150	e160	e140	e130	206	196	159	162	93	88
10	181	e160	e150	e160	e140	e130	207	191	154	152	93	83
11	e200	e160	e150	e160	e140	e130	203	164	155	145	96	80
12	e190	e160	e160	e150	e140	e130	207	174	154	144	93	78
13	e180	e160	e160	e140	e141	e130	208	185	179	159	91	78
14	e180	e160	e160	e130	e140	e130	207	204	214	154	89	79
15	e180	e160	e160	e130	e140	e130	192	263	200	146	86	79
16	e180	e160	e160	e130	e140	e130	182	337	198	140	88	78
17	e180	e160	e160	e130	e150	e140	180	373	226	134	93	79
18	e180	e160	e160	e140	e140	e160	187	360	249	168	89	87
19	e180	e160	e160	e150	e142	180	201	337	287	145	86	80
20	e180	e160	e160	e140	e144	198	191	318	299	129	86	76
21	e190	e160	e160	e140	e147	235	184	308	290	119	88	75
22	e190	e160	e170	e140	e150	257	169	301	270	112	94	74
23	e200	e160	e170	e140	e152	326	161	281	264	109	87	74
24	e200	e150	e160	e140	e150	376	136	251	249	113	78	74
25	e200	e150	e150	e135	e140	472	133	251	232	107	74	70
26	e200	e150	e140	e135	e130	549	137	253	212	106	75	69
27	e190	e160	e140	e135	e120	679	166	257	193	109	75	69
28	e190	e160	e140	e135	e120	613	176	251	190	106	73	70
29	e190	e160	e140	e135	---	498	190	251	183	108	71	70
30	e190	e160	e140	e135	---	431	193	235	169	105	68	70
31	e190	---	e140	e135	---	387	---	216	---	100	e68	---
TOTAL	6189	4980	4790	4395	3952	7568	5923	7349	6257	4154	2841	2285
MEAN	200	166	155	142	141	244	197	237	209	134	91.6	76.2
MAX	248	190	170	160	152	679	327	373	299	189	141	88
MIN	180	150	140	130	120	120	133	164	154	100	68	69
AC-FT	12280	9880	9500	8720	7840	15010	11750	14580	12410	8240	5640	4530

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2001, BY WATER YEAR (WY)

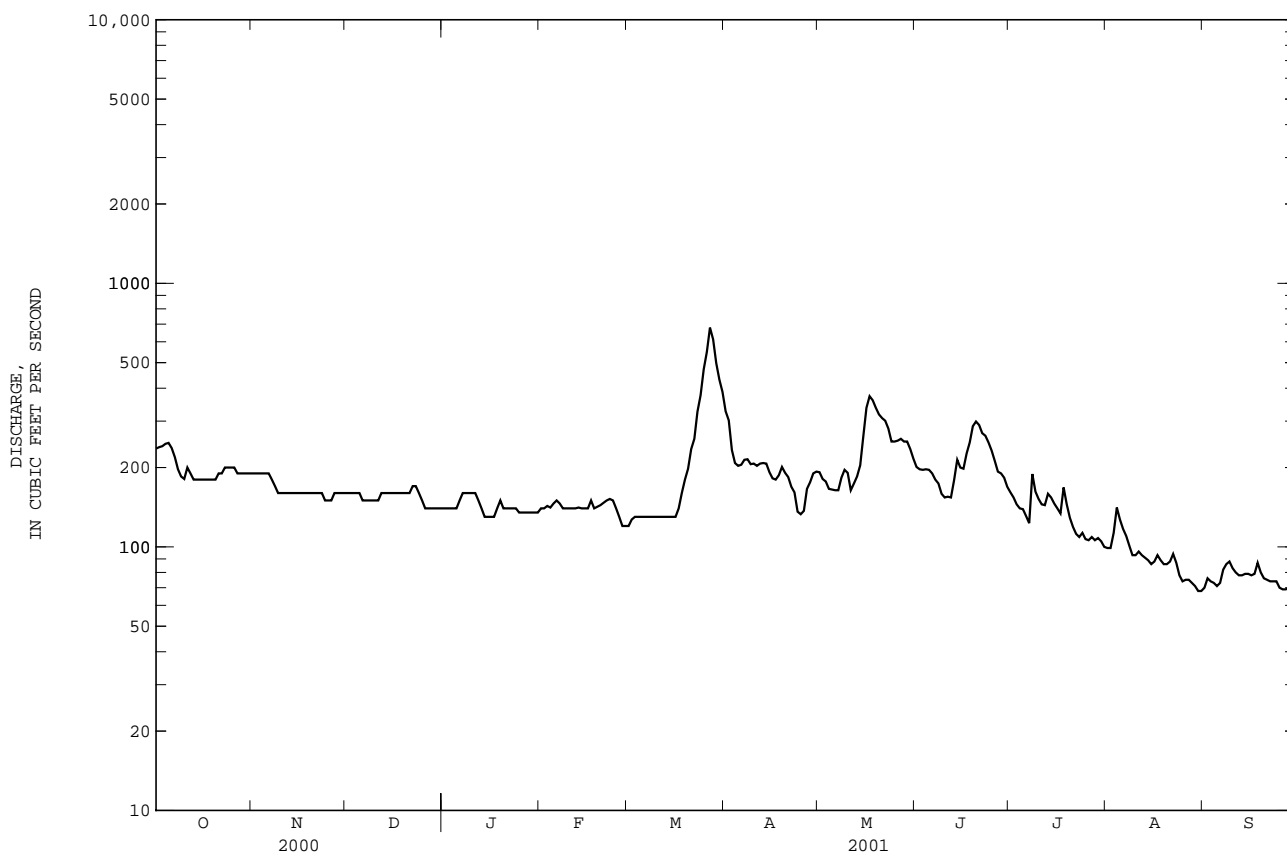
MEAN	226	234	205	186	212	368	686	990	1234	586	240	205
MAX	755	692	536	344	429	1159	1945	2794	3712	1556	707	658
(WY)	1983	1983	1983	1984	1986	1986	1985	1984	1983	1983	1983	1983
MIN	55.6	83.1	96.5	86.2	82.4	116	69.2	115	96.7	71.4	80.1	55.9
(WY)	1978	1978	1978	1993	1993	1988	1977	1977	1977	1977	1977	1977



## 10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1955 - 2001	
ANNUAL TOTAL	92753		60683		--	
ANNUAL MEAN	253		166		446	
HIGHEST ANNUAL MEAN	--		--		1049	1984
LOWEST ANNUAL MEAN	--		--		112	1977
HIGHEST DAILY MEAN	617	May 26	679	Mar 27	5400	Jun 7 1983
LOWEST DAILY MEAN	102	Sep 17	68	Aug 30,31	31	Oct 5 1977
ANNUAL SEVEN-DAY MINIMUM	106	Sep 15	70	Sep 24	36	Oct 1 1977
MAXIMUM PEAK FLOW	--		718	Mar 26	5620	Jun 7 1983
MAXIMUM PEAK STAGE	--		4.08	Mar 26	8.75	Jun 7 1983
ANNUAL RUNOFF (AC-FT)	184000		120400		323000	
10 PERCENT EXCEEDS	439		243		1070	
50 PERCENT EXCEEDS	200		160		231	
90 PERCENT EXCEEDS	140		86		115	

e Estimated.



## BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued  
(National Water-Quality Assessment Program Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
JAN														
10...	1425	80	610	11.8	101	8.2	736	-3.0	.00	--	--	--	--	
24...	1400	144	611	11.5	98	7.6	571	-1.0	.1	270	68.0	23.3	1.38	
FEB														
23...	0930	155	598	10.9	96	8.4	554	--	.3	250	63.9	21.6	1.33	
MAR														
18...	1000	156	614	11.5	101	8.3	539	4.0	1.3	230	58.3	19.8	1.63	
APR														
18...	1500	161	610	10.2	124	8.4	779	19.0	14.2	310	66.4	34.3	4.18	
MAY														
24...	1800	262	612	9.9	127	8.4	443	23.0	16.4	200	56.0	15.5	.98	
JUN														
19...	1120	300	619	8.0	99	8.3	750	19.5	15.5	320	67.6	35.6	4.37	
JUL														
25...	1500	108	611	10.0	137	8.4	590	31.0	19.9	260	62.3	26.0	1.80	
AUG														
07...	0940	108	617	7.7	101	8.2	500	18.5	18.3	220	55.1	21.2	1.36	
SEP														
13...	1210	87	614	10.8	136	8.4	463	24.5	16.2	220	58.5	18.1	1.12	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
JAN														
10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	.5	19.7	213	260	--	19.9	E.2	8.8	60.0	.47	134	344	330	
FEB														
23...	.5	18.0	202	246	--	19.5	.2	8.4	58.4	.43	134	319	313	
MAR														
18...	.5	16.8	196	228	5	19.4	.2	7.0	60.1	.44	136	322	301	
APR														
18...	1	45.2	233	274	5	48.6	.2	9.1	103	.67	213	490	452	
MAY														
24...	.4	11.5	172	201	5	11.5	E.1	5.9	46.5	.36	186	263	251	
JUN														
19...	1.0	39.5	262	320	--	41.5	.3	15.5	77.7	.64	383	473	440	
JUL														
25...	.7	26.5	205	240	5	27.9	.2	8.1	72.0	.48	104	356	348	
AUG														
07...	.5	18.7	172	210	--	19.5	E.2	7.1	69.1	.44	93.3	320	296	
SEP														
13...	.4	12.2	163	191	4	12.0	E.1	5.8	72.2	.35	61.3	260	277	
DATE		NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,4-D METHYL ESTER, WATER FLTRD REC (UG/L) (50470)
JAN														
10...	E.023	--	--	.169	E.003	--	E.009	--	E11k	23	--	--	--	--
24...	<.041	E.09	.12	.157	<.006	.006	<.018	.017	--	--	M	12.4	--	
FEB														
23...	<.041	E.10	.17	.139	<.006	E.004	<.018	.019	--	E1k	M	5.2	--	
MAR														
18...	<.041	.15	.25	.075	<.006	.006	<.018	.040	--	--	<10	30.0	--	
APR														
18...	<.041	.43	.51	<.047	<.006	.014	<.018	.087	--	--	M	48.9	--	
MAY														
24...	E.025	E.06	.30	E.035	<.006	.008	<.020	.073	--	22	<10	29.3	--	
JUN														
19...	<.040	1.1	1.0	<.050	E.004	.026	<.020	.140	--	--	20	34.6	--	
JUL														
25...	<.040	.23	.35	E.041	<.006	.009	<.020	.034	--	--	<10	22.5	--	
AUG														
07...	E.024	.20	.30	.050	E.003	.010	<.020	.031	--	74	<10	28.9	<.009	
SEP														
13...	<.040	.12	.20	E.037	E.003	E.004	<.020	.015	--	--	M	18.6	--	

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued  
(National Water-Quality Assessment Program Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	2,4-D, DIS- SOLVED (UG/L) (39732)	2,4-DB WATER, FLTRD, GF 0.7U REC (UG/L) (38746)	2,6-DI- ETHYL ANILINE WAT FLT GF 0.7 U GF, REC (UG/L) (82660)	3HYDRXY CARBO- FURAN WAT,FLT GF 0.7U REC (UG/L) (49308)	3-KETO CARBO- FURAN WATER FLTRD REC (UG/L) (50295)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ACIFL- UORFEN WATER, FLTRD, GF 0.7U REC (UG/L) (49315)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALDI- CARB SULFONE WAT,FLT GF 0.7U REC (UG/L) (49313)	ALDICA- RB SUL- FOXIDE, WAT,FLT GF 0.7U REC (UG/L) (49314)	ALDI- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (49312)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
FEB 23...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
MAR 18...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
APR 18...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
MAY 24...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
JUN 19...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
JUL 25...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
AUG 07...	<.02	<.02	<.002	<.01	<1.50	<.004	<.01	<.002	<.02	<.01	<.04	<.005	<.007
SEP 13...	--	--	<.002	--	--	<.004	--	<.002	--	--	--	<.005	<.007
DATE	BENDIO- CARB, WATER FLTRD REC (UG/L) (50299)	BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)	BENOMYL WATER FLTRD REC (UG/L) (50300)	BEN- SUL- FURON METHYL WAT FLT REC (UG/L) (61693)	BENTA- ZON, WATER, FLTRD, GF 0.7U REC (UG/L) (38711)	BRO- MACIL, WATER, DISS, REC (UG/L) (04029)	BRO- MOXYNIL WATER, FLTRD, GF 0.7U REC (UG/L) (49311)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAF- FEINE, WATER FLTRD REC (UG/L) (50305)	CAR- BARYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49310)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN, WATER, FLTRD, GF 0.7U REC (UG/L) (49309)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
FEB 23...	--	E.003	--	--	--	--	--	<.002	--	--	<.041	--	<.020
MAR 18...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
APR 18...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
MAY 24...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
JUN 19...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
JUL 25...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
AUG 07...	<.025	<.010	<.004	<.0158	<.01	<.03	<.02	<.002	<.010	<.03	<.041	<.01	<.020
SEP 13...	--	<.010	--	--	--	--	--	<.002	--	--	<.041	--	<.020
DATE	CHLOR- AMBEN, METHYL ESTER WATER FLTRD (UG/L) (61188)	CHLORI- MURON, WATER FLTRD REC (UG/L) (50306)	CHLORO- THALO- NIL, WAT,FLT GF 0.7U REC (UG/L) (49306)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CLOPYR- ALID, WATER, FLTRD, GF 0.7U REC (UG/L) (49305)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	SI- CLOATE, WATER, DISS, REC (UG/L) (04031)	DACTHAL MONO- ACID, WAT,FLT GF 0.7U REC (UG/L) (49304)	DCPA WATER FLTRD GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DEETHYL DEISO- PROPYL ATRAZIN WATER, DISS, REC (UG/L) (04039)	DEISO- PROPYL ATRAZIN WATER, DISS, REC (UG/L) (04038)	DI- AZINON, DIS- SOLVED (UG/L) (39572)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
FEB 23...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
MAR 18...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
APR 18...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
MAY 24...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
JUN 19...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
JUL 25...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005
AUG 07...	<.02	<.010	<.04	<.005	<.01	<.018	<.01	<.01	<.003	<.006	<.01	<.04	<.005
SEP 13...	--	--	--	<.005	--	<.018	--	--	<.003	<.006	--	--	<.005

## BEAR RIVER BASIN

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued  
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## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	DICAMBA WATER, FLTRD, GF 0.7U REC (UG/L) (38442)	DICHLOR PROP, WATER, FLTRD, GF 0.7U REC (UG/L) (49302)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DINOSEB WATER, FLTRD, GF 0.7U REC (UG/L) (49301)	DIPHEN- AMID, WATER, DISS, REC (UG/L) (04033)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	DIURON, WATER, FLTRD, GF 0.7U REC (UG/L) (49300)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FEN- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49297)	FLUMET- SULAM WATER FLTRD, REC (UG/L) (61694)	FLUO- METURON WATER, FLTRD, GF 0.7U REC (UG/L) (38811)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
FEB 23...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
MAR 18...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
APR 18...	--	--	<.005	--	--	<.021	--	<.050	<.009	<.005	--	--	--
MAY 24...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
JUN 19...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
JUL 25...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
AUG 07...	<.01	<.01	<.005	<.01	<.03	<.021	<.01	<.002	<.009	<.005	<.03	<.0110	<.03
SEP 13...	--	--	<.005	--	--	<.021	--	<.002	<.009	<.005	--	--	--
DATE	FONOFOS WATER DISS REC (UG/L) (04095)	HYDROXY ATRA- ZINE WATER FLTRD REC (UG/L) (50355)	IMAZ- AQUIN WATER FLTRD REC (UG/L) (50356)	IMAZE- THAPYR WATER FLTRD REC (UG/L) (50407)	IMID- ACLOP- RID WATER FLTRD REC (UG/L) (61695)	LINDANE DIS- SOLVED (UG/L) (39341)	LINURON WATER, FLTRD, GF 0.7U REC (UG/L) (38478)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	MCPA, WATER, FLTRD, GF 0.7U REC (UG/L) (38482)	MCPB, WATER, FLTRD, GF 0.7U REC (UG/L) (38487)	METAL- AXYL WATER FLTRD REC (UG/L) (50359)	METHIO- CARB, WATER, FLTRD, GF 0.7U REC (UG/L) (38501)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
FEB 23...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
MAR 18...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
APR 18...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
MAY 24...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
JUN 19...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
JUL 25...	<.003	--	--	--	--	<.004	--	<.035	E.006	--	--	--	--
AUG 07...	<.003	<.008	<.016	<.017	<.0068	<.004	<.01	<.035	E.006	<.02	<.01	<.020	<.01
SEP 13...	<.003	--	--	--	--	<.004	--	<.035	<.027	--	--	--	--
DATE	METH- OMYL OXIME WATER FLTRD REC (UG/L) (61696)	METH- OMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (49296)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MET- SUL- FURON METHYL WAT FLT REC (UG/L) (61697)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	NEB- URON, WATER, FLTRD, GF 0.7U REC (UG/L) (49294)	NICOSUL FURON WATER FLTRD REC (UG/L) (50364)	NORFLUR AZON, WATER, FLTRD, GF 0.7U REC (UG/L) (49293)	ORY- ZALIN, WATER, FLTRD, GF 0.7U REC (UG/L) (49292)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
FEB 23...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
MAR 18...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
APR 18...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
MAY 24...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
JUN 19...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
JUL 25...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--
AUG 07...	<.0110	<.0044	<.050	<.006	<.013	<.006	<.0250	<.002	<.007	<.01	<.013	<.02	<.02
SEP 13...	--	--	<.050	<.006	<.013	<.006	--	<.002	<.007	--	--	--	--

10038000 BEAR RIVER BELOW SMITHS FORK, NEAR COKEVILLE, WY--Continued  
(National Water-Quality Assessment Program Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	OXAMYL OXIME WATER FLTRD REC (UG/L) (50410)	OXAMYL, WATER, FLTRD, GF 0.7U REC (UG/L) (38866)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FLTRD GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT GF, REC (UG/L) (82687)	PHORATE WATER FLTRD GF, REC (UG/L) (82664)	PIC- LORAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49291)	PRO- METON, WATER, FLTRD, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, FLTRD, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD GF, REC (UG/L) (82679)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
FEB 23...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
MAR 18...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
APR 18...	--	--	<.003	<.007	<.002	E.016	<.006	<.011	--	<.015	<.004	<.010	<.011
MAY 24...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
JUN 19...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
JUL 25...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	<.015	<.004	<.010	<.011
AUG 07...	<.013	<.01	<.003	<.007	<.002	<.010	<.006	<.011	.09	E.002	<.004	<.010	<.011
SEP 13...	--	--	<.003	<.007	<.002	<.010	<.006	<.011	--	E.003	<.004	<.010	<.011

DATE	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	PRO- PHAM, WATER, FLTRD, GF 0.7U REC (UG/L) (49236)	PROP- ICONA- ZOLE , WATER FLTRD REC (UG/L) (50471)	PRO- POXUR, WATER, FLTRD, GF 0.7U REC (UG/L) (38538)	SIDURON WATER FLTRD REC (UG/L) (38548)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	SULFO- MET- RURON METHYL WTR FLT REC (UG/L) (50337)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL, WATER, DISS, REC (UG/L) (04032)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
FEB 23...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
MAR 18...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
APR 18...	<.023	--	--	--	--	<.011	--	E.005	--	<.034	<.017	<.005	<.002
MAY 24...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
JUN 19...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
JUL 25...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002
AUG 07...	<.023	<.01	<.021	<.01	<.017	<.011	<.009	<.016	<.01	<.034	<.017	<.005	<.002
SEP 13...	<.023	--	--	--	--	<.011	--	<.016	--	<.034	<.017	<.005	<.002

DATE	TRI- BENURON METHYL WATER FLTRD (UG/L) (61159)	TRI- CLOPYR, WATER, FLTRD, GF 0.7U REC (UG/L) (49235)	TRI- FLUR- ALIN WAT FLT GF, REC (UG/L) (82661)	UREA 3( 4-CHLOR OPHENYL METHYL WAT FLT REC (UG/L) (61692)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
JAN 10...	--	--	--	--	--	74	16
JAN 24...	--	--	<.009	--	--	44	17
FEB 23...	--	--	E.003	--	--	43	18
MAR 18...	--	--	<.009	--	--	14	5.9
APR 18...	--	--	<.090	--	--	39	17
MAY 24...	--	--	<.009	--	--	42	30
JUN 19...	--	--	<.009	--	90	57	46
JUL 25...	--	--	<.009	--	85	29	8.5
AUG 07...	<.01	<.02	<.009	<.0242	--	16	4.7
SEP 13...	--	--	<.009	--	--	7	1.6

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WY

LOCATION.--Lat 42°12'40", long 111°03'11", in NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.15, T.14 S., R. 46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi west of Wyoming-Idaho State line, 0.5 mi west of Border, and 2.1 mi upstream from Thomas Fork.

DRAINAGE AREA.--2,486 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1937 to September 1996, October 1996 to 2000 (seasonal), October 2000 to September 2001.

REVISED RECORDS.--WRD UT-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,051.63 ft above sea level, unadjusted.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by regulation of upstream reservoirs, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	176	e160	e140	e130	e120	384	172	172	126	84	45
2	202	182	e160	e140	e120	e120	343	113	168	120	70	48
3	201	177	e160	e140	e120	e120	304	113	167	109	73	45
4	203	172	e160	e140	e120	e130	256	106	168	100	92	43
5	202	181	e160	e140	e120	e130	242	104	169	97	92	43
6	193	185	e160	e150	e120	e130	239	105	161	87	82	44
7	178	e180	e150	e160	e120	e130	246	104	136	125	78	45
8	158	e160	e150	e160	e120	e130	251	114	124	135	71	48
9	145	e150	e150	e160	e120	e130	245	160	115	124	65	51
10	144	e160	e150	e160	e120	e130	237	158	116	117	62	51
11	157	e160	e150	e160	e130	e130	233	121	115	114	62	48
12	147	e150	e160	e150	e130	e130	230	106	125	119	63	46
13	138	e160	e160	e140	e130	e130	230	104	161	125	61	47
14	142	e160	e160	e130	e130	e130	223	123	156	132	60	49
15	142	e160	e160	e130	e130	e130	218	202	152	123	58	51
16	133	e170	e170	e130	e130	e130	207	277	161	116	58	51
17	131	e160	e160	e130	e130	e140	201	322	183	110	59	49
18	135	e160	e160	e140	e130	e150	201	318	217	122	58	52
19	131	e160	e160	e150	e140	e160	212	302	240	134	56	54
20	130	e160	e160	e140	e150	e170	223	283	236	111	54	46
21	136	e160	e160	e130	e150	e200	207	274	223	100	55	45
22	146	e160	e160	e130	e150	e250	201	266	214	95	58	44
23	149	e160	e160	e130	e150	e300	182	250	204	90	57	44
24	160	e150	e160	e140	e150	e400	169	222	187	92	50	45
25	175	e150	e150	e140	e140	e480	135	220	169	92	47	45
26	184	e150	e140	e130	e130	481	136	218	153	92	46	43
27	176	e160	e140	e120	e120	646	163	224	149	91	46	46
28	172	e160	e140	e120	e120	630	181	220	148	92	43	47
29	171	e160	e140	e120	---	580	172	213	137	91	43	47
30	170	e160	e140	e120	---	478	178	209	130	91	42	49
31	177	---	e140	e120	---	431	---	190	---	86	42	---
TOTAL	5030	4893	4790	4290	3650	7546	6649	5913	4956	3358	1887	1411
MEAN	162	163	155	138	130	243	222	191	165	108	60.9	47.0
MAX	203	185	170	160	150	646	384	322	240	135	92	54
MIN	130	150	140	120	120	120	135	104	115	86	42	43
AC-FT	9980	9710	9500	8510	7240	14970	13190	11730	9830	6660	3740	2800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2001, BY WATER YEAR (WY)\*

	MEAN	213	228	199	184	210	384	754	1031	1179	539	229	181
MAX	751	693	563	381	479	1294	1979	3158	3829	1670	752	671	
(WY)	1983	1983	1983	1985	1986	1986	1985	1952	1983	1983	1983	1983	1983
MIN	51.4	81.2	106	77.6	75.2	105	71.2	74.4	62.2	54.2	42.3	38.5	
(WY)	1978	1978	1993	1993	1993	1988	1977	1977	1977	1977	1940	1940	

## 10039500 BEAR RIVER AT BORDER, WY--Continued

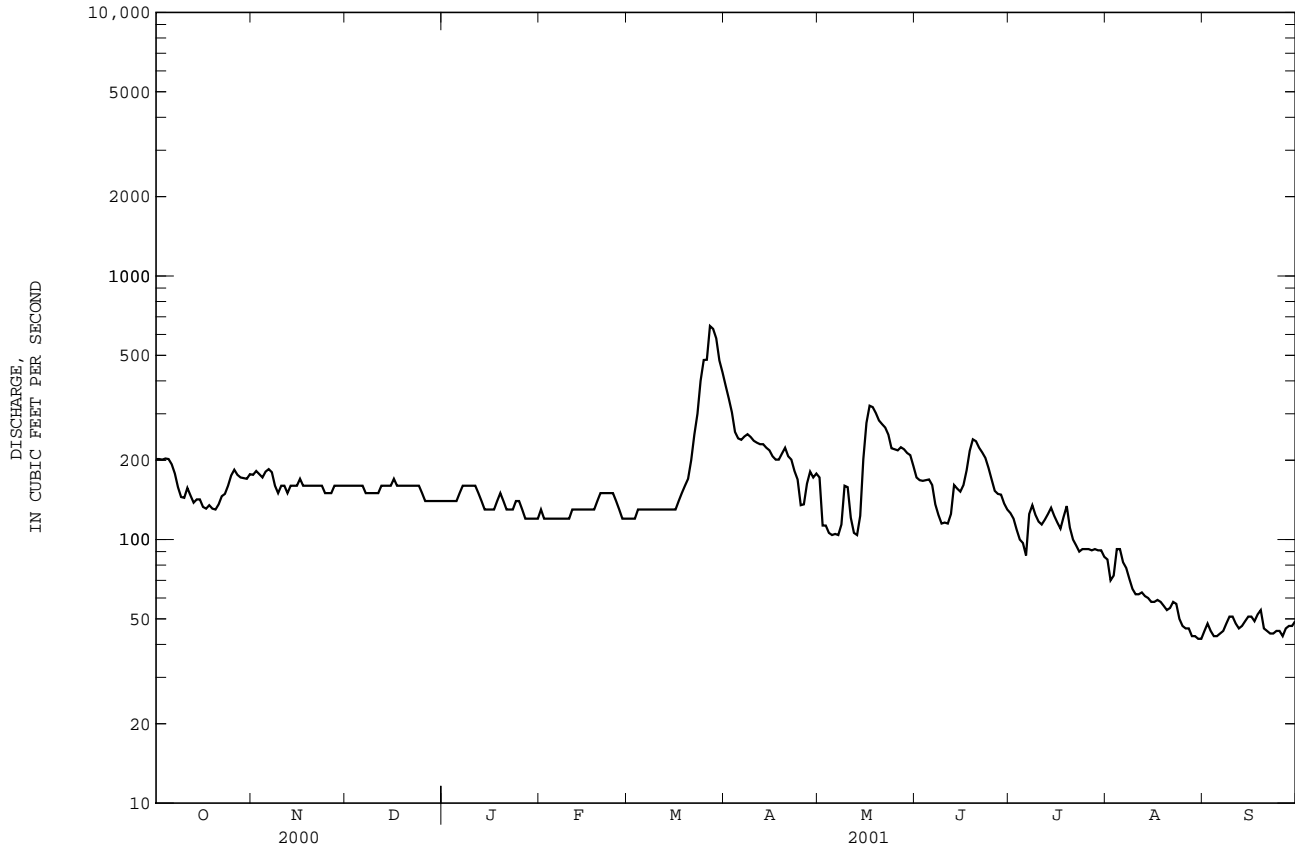
## SUMMARY STATISTICS

## FOR 2001 WATER YEAR

## WATER YEARS 1938 - 2001\*

ANNUAL TOTAL	54373		
ANNUAL MEAN	149		433
HIGHEST ANNUAL MEAN	--		1068 1983
LOWEST ANNUAL MEAN	--		103 1977
HIGHEST DAILY MEAN	646	Mar 27	4840 Jun 8 1983
LOWEST DAILY MEAN	42	Aug 30,31	25 Apr 29 1977
ANNUAL SEVEN-DAY MINIMUM	44	Aug 26	29 Apr 28 1977
MAXIMUM PEAK FLOW	707	Mar 27	4880 Jun 7 1983
MAXIMUM PEAK STAGE	3.69	Mar 27	9.69 Jun 7 1983
ANNUAL RUNOFF (AC-FT)	107800		314000
10 PERCENT EXCEEDS	223		1180
50 PERCENT EXCEEDS	140		230
90 PERCENT EXCEEDS	52		110

\* For period of operation.  
e Estimated.



## COLUMBIA RIVER BASIN

## SNAKE RIVER BASIN

13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY

LOCATION.--Lat 44°05'21", long 110°41'38", in Hydrologic Unit 17040101, Grand Teton National Park, on left bank 50 ft upstream from State Highway 89 bridge, 2 mi downstream from the south boundary of Yellowstone National Park, 600 ft downstream from the confluence with Sheffield Creek.

DRAINAGE AREA.--486 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1983 to current year. Prior to 1988 water year, published as station 13010200.

GAGE.--Water-stage recorder. Datum of the gage is 6,801.61 ft above sea level, (levels by U.S. Coast and Geodetic Survey). A nonrecording cantilever chain gage was used from 1913-18 at a site 2.5 mi upstream at a different datum. In 1918, an auxiliary chain gage was installed at the current site and read periodically. Water-stage recorder installed July 1921 at the current site at a different datum and operated until July 1925. Records probably not comparable.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	314	273	e260	269	300	352	2230	1160	416	217	175
2	358	292	262	e260	275	303	357	1590	1120	401	209	170
3	314	275	268	e260	279	304	350	1410	1090	383	205	163
4	298	274	264	e260	283	309	363	1580	1080	380	210	161
5	291	297	262	e260	293	300	356	1990	1010	373	217	166
6	282	286	255	e260	296	305	359	2100	950	373	211	202
7	275	270	258	e240	e280	300	360	1960	879	373	207	213
8	274	255	256	e240	e280	300	364	2440	826	372	207	211
9	274	285	269	e240	e280	299	342	3210	796	381	208	190
10	281	276	278	e280	e280	300	340	3230	755	406	204	181
11	314	267	e260	e280	294	302	340	3160	712	385	201	173
12	328	261	e260	e280	292	293	348	3410	775	366	198	170
13	358	243	e260	e280	294	287	344	3670	808	350	196	181
14	366	245	e280	e280	289	292	360	3990	820	362	215	204
15	363	260	e280	e280	283	286	343	5130	953	374	217	206
16	357	254	e260	e240	292	287	363	5170	975	360	221	196
17	353	254	e280	e240	292	290	397	3570	852	338	211	211
18	355	249	e280	e260	290	297	472	3070	762	334	203	208
19	356	247	e260	e260	290	295	567	2750	708	330	193	191
20	343	237	e260	e260	296	323	565	2550	672	312	189	185
21	345	238	e260	e260	302	345	517	1960	639	298	186	180
22	340	241	e280	e260	313	358	504	1900	607	285	187	178
23	327	238	e280	e260	312	362	521	2060	575	276	186	176
24	329	238	e280	e260	312	366	524	2120	559	269	183	175
25	345	242	e260	e270	317	376	635	2050	558	260	181	174
26	342	248	e260	e260	312	382	843	2050	524	255	178	173
27	331	258	e260	e260	312	361	1130	1840	503	245	175	172
28	327	250	e260	e260	298	351	1450	1800	484	237	173	171
29	324	253	e260	e260	---	354	2010	1570	459	227	167	172
30	320	273	e260	e260	---	357	1800	1380	439	223	163	173
31	320	---	e260	e260	---	335	---	1220	---	222	164	---
TOTAL	10091	7820	8245	8090	8205	9919	17576	78160	23050	10166	6082	5501
MEAN	326	261	266	261	293	320	586	2521	768	328	196	183
MAX	366	314	280	280	317	382	2010	5170	1160	416	221	213
MIN	274	237	255	240	269	286	340	1220	439	222	163	161
AC-FT	20020	15510	16350	16050	16270	19670	34860	155000	45720	20160	12060	10910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

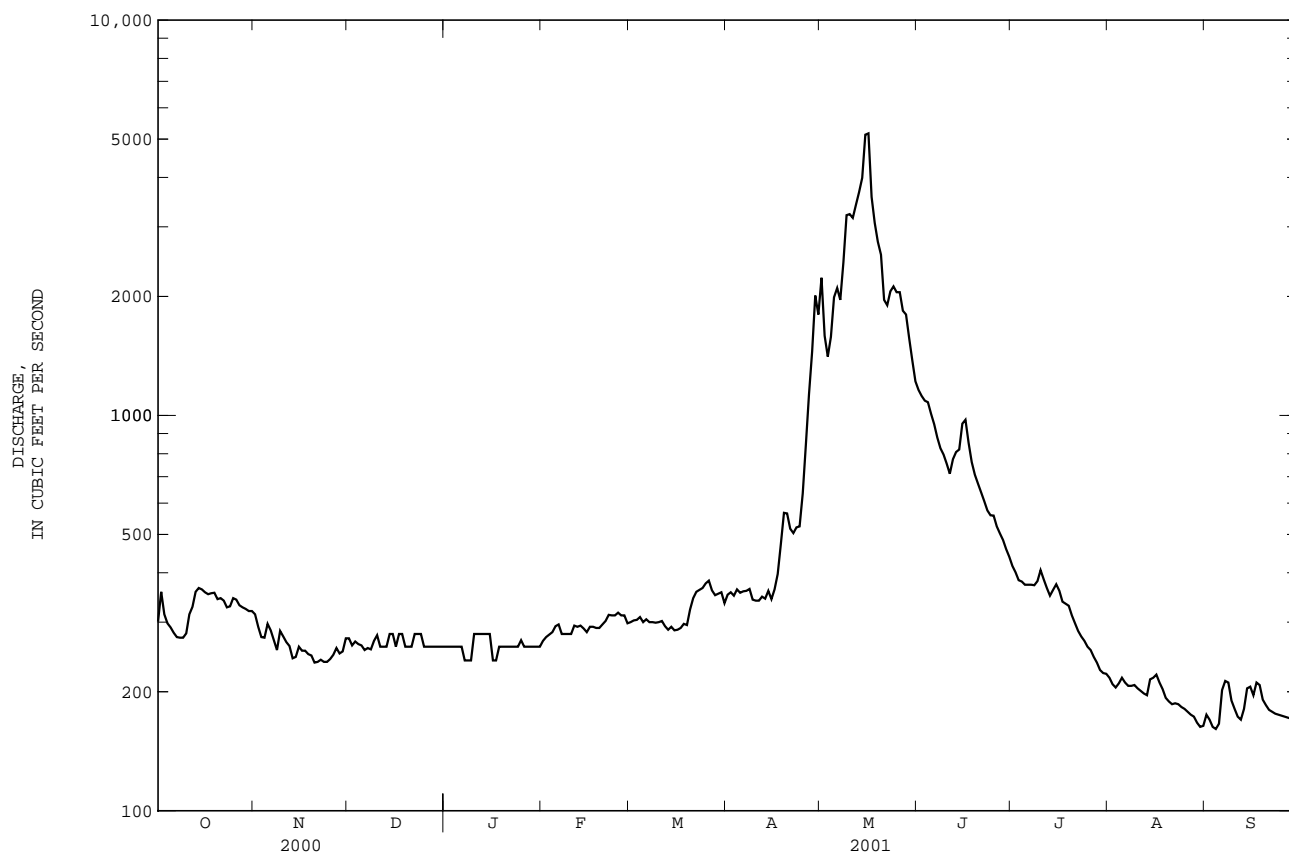
MEAN	364	363	367	363	354	360	727	3031	3174	915	435	351
MAX	679	607	531	720	469	506	1509	5484	6701	1633	861	644
(WY)	1984	1984	1997	1997	1999	1986	1990	1997	1996	1995	1997	1997
MIN	185	213	247	261	267	279	424	1818	768	328	196	168
(WY)	1989	1988	1988	2001	1989	1988	1993	1987	2001	2001	2001	1994



## 13010065 SNAKE RIVER ABOVE JACKSON LAKE, AT FLAGG RANCH, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1984 - 2001	
ANNUAL TOTAL	297989		192905		--	
ANNUAL MEAN	814		529		902	
HIGHEST ANNUAL MEAN	--		--		1538	1997
LOWEST ANNUAL MEAN	--		--		526	1988
HIGHEST DAILY MEAN	6400	May 26	5170	May 16	11300	Jun 5 1996
LOWEST DAILY MEAN	237	Nov 20	161	Sep 4	161	Sep 6 1994
ANNUAL SEVEN-DAY MINIMUM	240	Nov 19	166	Aug 30	163	Sep 4 1994
ANNUAL RUNOFF (AC-FT)	591100		382600		653200	
10 PERCENT EXCEEDS	2280		1120		2420	
50 PERCENT EXCEEDS	390		292		401	
90 PERCENT EXCEEDS	260		196		262	

e Estimated.



13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Water years 1986 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June to September 1994, June to September 1995, May to September 1996.

INSTRUMENTATION:--Temperature recording data logger.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 22.5°C July 22, 24, Aug. 11, 1994.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	
OCT														
26...	1357	347	595	10.3	113	7.6	275	9.5	8.5	59	18.4	3.30	4.52	
30...	1050	324	590	9.5	101	7.9	287	5.5	7.0	59	18.2	3.21	4.66	
NOV														
15...	1155	276	591	10.9	103	8.2	325	5.0	2.3	69	21.3	3.74	4.74	
DEC														
12...	1200	257	588	11.7	104	7.5	308	-7.0	.00	61	19.1	3.35	4.96	
12...	1230	257	590	11.3	100	8.3	311	-8.0	.00	62	19.4	3.31	4.97	
JAN														
18...	1320	277	600	10.4	94	7.8	294	-4.0	1.4	57	17.6	3.12	5.06	
FEB														
22...	1000	310	594	11.3	107	7.7	284	5.0	2.6	52	16.2	2.82	5.00	
MAR														
08...	1100	282	602	12.0	109	7.6	295	-2.0	1.5	55	17.2	3.03	4.93	
MAY														
02...	1130	1390	595	11.0	105	7.7	150	3.0	2.9	47	14.2	2.70	2.10	
15...	0830	5520	593	10.1	101	7.7	82	9.5	4.6	29	9.00	1.56	.90	
JUN														
12...	0945	770	590	8.7	103	8.0	194	14.2	11.4	50	15.2	2.84	2.68	
JUL														
24...	0930	276	598	8.8	113	8.1	303	19.8	15.3	69	21.0	3.87	4.53	
AUG														
07...	0900	204	602	8.6	112	8.0	341	18.8	16.6	75	23.0	4.26	5.35	
SEP														
18...	0940	218	599	8.6	100	8.2	358	5.0	11.0	82	25.1	4.66	5.42	
DATE		SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB (MG/L CACO3) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT														
26...	2	30.4	--	15.9	2.3	33.2	30.6	.26	176	188	183	<.041	.09	
30...	2	33.3	76	17.6	.2	33.7	31.9	.27	171	196	188	<.041	.11	
NOV														
15...	2	36.6	--	18.8	2.1	35.0	38.0	.29	161	216	209	<.041	.08	
DEC														
12...	2	35.9	80	18.7	2.5	37.4	33.3	.28	144	208	203	<.041	.29	
12...	2	37.5	--	20.3	2.6	36.8	34.2	.28	145	209	206	<.041	.19	
JAN														
18...	2	35.1	--	20.1	2.5	37.1	32.0	.28	153	205	204	<.041	.13	
FEB														
22...	2	35.0	--	17.9	2.7	37.5	29.0	.26	157	188	188	<.041	.10	
MAR														
08...	2	34.8	--	18.9	2.6	37.8	30.4	.27	152	200	187	<.041	.10	
MAY														
02...	.8	12.2	--	6.7	.9	17.6	12.1	.16	447	119	98	<.041	.25	
15...	.4	4.7	--	2.8	.4	9.8	4.4	.08	924	62	52	<.040	.50	
JUN														
12...	1	18.6	--	9.0	1.3	24.2	18.3	.18	274	132	127	<.040	.12	
JUL														
24...	2	33.2	--	16.8	2.1	32.4	33.6	.27	150	201	211	<.040	.08	
AUG														
07...	2	38.7	--	19.8	2.1	34.5	41.5	.30	120	218	233	E.033	.09	
SEP														
18...	2	41.1	--	22.5	2.1	34.5	45.6	.33	141	240	239	<.040	.10	

13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	2,6-DI- ETHYL ANILINE WAT FLT GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD GF, REC (UG/L) (82673)
OCT													
26...	<.047	<.018	.005	--	--	10	E2.2	--	--	--	--	--	--
30...	E.025	<.018	<.060	1.5	<.2	10	3.4	<.002	<.004	<.002	<.005	<.007	<.010
NOV													
15...	E.041	<.018	.009	--	--	M	3.3	--	--	--	--	--	--
DEC													
12...	E.038	<.018	E.036	1.4	.4	M	3.2	--	--	--	--	--	--
12...	E.044	<.018	.011	--	--	10	3.6	--	--	--	--	--	--
JAN													
18...	E.044	<.018	.011	--	--	M	E2.8	--	--	--	--	--	--
FEB													
22...	E.042	<.018	.010	1.1	--	20	E2.8	<.002	<.004	<.002	<.005	<.007	<.010
MAR													
08...	E.044	<.018	.013	--	--	10	<3.2	<.002	<.004	<.002	<.005	<.007	<.010
MAY													
02...	.051	<.018	.063	3.2	--	30	5.4	<.002	<.004	<.002	<.005	<.007	<.010
15...	E.043	.030	.344	--	--	30	5.6	<.002	<.004	<.002	<.005	<.007	<.010
JUN													
12...	E.025	<.020	.016	1.7	--	M	E2.2	<.002	<.004	<.002	<.005	<.007	<.010
JUL													
24...	E.023	<.020	.011	--	--	10	4.7	<.002	<.004	<.002	<.005	<.007	<.010
AUG													
07...	E.026	<.020	.007	1.1	--	10	E2.7	<.002	<.004	<.002	<.005	<.007	<.010
SEP													
18...	<.050	<.020	.010	--	--	10	4.2	<.002	<.004	<.002	<.005	<.007	<.010
DATE	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD GF, REC (UG/L) (82677)	EPTC WATER FLTRD GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD GF, REC (UG/L) (82672)
OCT													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	E.003	<.021	<.002	<.009	<.005
NOV													
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC													
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB													
22...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
MAR													
08...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
MAY													
02...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
15...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
JUN													
12...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
JUL													
24...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
AUG													
07...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
SEP													
18...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005

13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
NOV 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
MAR 08...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
MAY 02...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
15...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
JUN 12...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
JUL 24...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
AUG 07...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
SEP 18...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
DATE	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--	--	--
30...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
NOV 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 22...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
MAR 08...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
MAY 02...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
15...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
JUN 12...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
JUL 24...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
AUG 07...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
SEP 18...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002

13010065 SNAKE RIVER ABOVE JACKSON LAKE AT FLAGG RANCH, WY--Continued  
(National Water-Quality Assessment Program Station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT			
26...	--	1	.94
30...	<.009	4	3.5
NOV			
15...	--	1	.75
DEC			
12...	--	6	4.2
12...	--	2	1.4
JAN			
18...	--	2	1.5
FEB			
22...	<.009	2	1.7
MAR			
08...	<.009	1	.76
MAY			
02...	<.009	17	64
15...	<.009	330	4920
JUN			
12...	<.009	4	8.3
JUL			
24...	<.009	1	.75
AUG			
07...	<.009	1	.55
SEP			
18...	<.009	1	.59

E -- Estimated value.

M -- Presence verified, not quantified.

## SNAKE RIVER BASIN

13011000 SNAKE RIVER NEAR MORAN, WY

LOCATION.--Lat 43°51'30", long 110°35'09"(revised), in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.18, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 1,000 ft downstream from Jackson Lake Dam, 4.1 mi west of Moran, and at mile 988.7.

DRAINAGE AREA.--807 mi<sup>2</sup>. Mean elevation, 8,040 ft.

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "South Fork Snake River at Moran" prior to October 1910 and as "Snake River at Moran" October 1910 to September 1968.

REVISED RECORDS.--WSP 1217: 1944(m). WSP 1347: 1906-10. WDR Idaho 1974: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,727.84 ft above sea level (levels by U.S. Bureau of Reclamation). Prior to June 13, 1917, nonrecording gage, and June 14, 1917 to May 20, 1940, water-stage recorder, at site 1.5 mi downstream at different datums.

REMARKS.--Records good. Station operated and record provided by Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

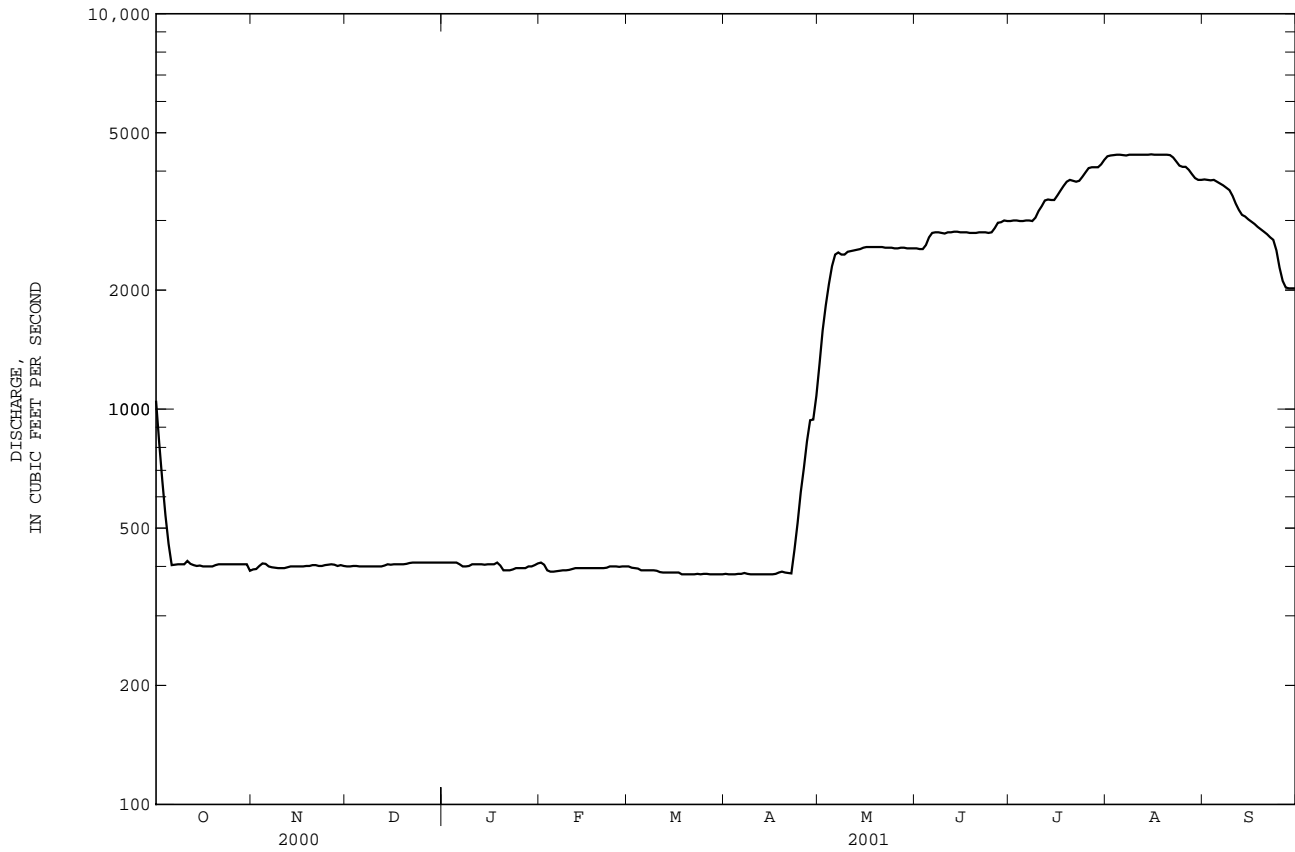
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	393	400	409	409	400	383	1300	2550	2990	4360	3810
2	822	394	400	409	404	397	382	1580	2540	3000	4380	3800
3	659	401	401	409	391	396	382	1830	2540	3000	4390	3790
4	539	407	401	409	388	395	382	2070	2600	2990	4400	3800
5	456	406	400	409	388	391	383	2300	2720	2990	4400	3760
6	403	400	400	405	389	391	383	2460	2790	3000	4390	3720
7	404	398	400	400	390	391	385	2490	2800	3000	4380	3680
8	405	397	400	400	391	391	383	2460	2800	2990	4400	3630
9	405	396	400	401	391	391	382	2460	2790	3050	4400	3580
10	405	396	400	405	392	390	382	2500	2780	3170	4400	3460
11	413	396	400	405	394	387	382	2510	2800	3260	4400	3310
12	406	398	400	405	396	386	382	2520	2800	3370	4400	3190
13	403	400	402	405	396	386	382	2530	2810	3390	4400	3100
14	401	400	405	404	396	386	382	2540	2810	3380	4400	3070
15	402	400	404	405	396	386	382	2560	2800	3380	4410	3020
16	400	400	405	405	396	386	382	2570	2800	3470	4400	2980
17	400	400	405	405	396	386	383	2570	2800	3570	4400	2940
18	400	401	405	409	396	382	386	2570	2790	3670	4400	2890
19	400	401	405	402	396	382	388	2570	2790	3760	4400	2850
20	403	403	406	391	396	382	386	2570	2790	3800	4400	2810
21	405	403	408	391	396	382	385	2570	2800	3780	4390	2770
22	405	401	409	391	397	382	384	2560	2800	3760	4330	2720
23	405	401	409	393	400	383	441	2560	2800	3780	4230	2680
24	405	403	409	396	400	382	515	2560	2790	3870	4130	2520
25	405	404	409	396	400	383	616	2550	2800	3970	4100	2280
26	405	405	409	396	399	383	709	2550	2870	4070	4100	2110
27	405	404	409	396	400	382	829	2560	2960	4090	4030	2030
28	405	401	409	400	400	382	937	2560	2970	4090	3930	2020
29	405	403	409	400	---	382	941	2550	3000	4090	3840	2020
30	405	401	409	403	---	382	1080	2550	2990	4160	3800	2020
31	390	---	409	407	---	382	---	2550	---	4270	3800	---
TOTAL	14016	12013	12537	12461	11083	11987	14499	75080	83680	109160	132590	90360
MEAN	452	400	404	402	396	387	483	2422	2789	3521	4277	3012
MAX	1050	407	409	409	409	400	1080	2570	3000	4270	4410	3810
MIN	390	393	400	391	388	382	382	1300	2540	2990	3800	2020
AC-FT	27800	23830	24870	24720	21980	23780	28760	148900	166000	216500	263000	179200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2001, BY WATER YEAR (WY)

	MEAN	357	296	333	311	374	478	753	1508	3502	3938	3499	1988
MAX	1605	3009	4280	1362	2489	3053	3828	5658	8594	8182	7370	5265	
(WY)	1913	1957	1957	1912	1961	1951	1974	1971	1918	1921	1918	1984	
MIN	5.06	3.00	2.00	2.00	2.00	2.00	2.53	6.48	51.7	983	987	146	
(WY)	1948	1949	1945	1945	1945	1945	1945	1945	1932	1989	1919	1910	

## 13011000 SNAKE RIVER NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1904 - 2001	
ANNUAL TOTAL	442549		579466		--	
ANNUAL MEAN	1209		1588		1451	
HIGHEST ANNUAL MEAN	--		--		2548	1997
LOWEST ANNUAL MEAN	--		--		687	1989
HIGHEST DAILY MEAN	5710	May 31	4410	Aug 15	14700	Jun 13 1918
LOWEST DAILY MEAN	390	Oct 31	382	Mar 18	.30	Oct 28 1969
ANNUAL SEVEN-DAY MINIMUM	397	Nov 6	382	Apr 9	1.4	Oct 24 1969
ANNUAL RUNOFF (AC-FT)	877800		1149000		1051000	
10 PERCENT EXCEEDS	2990		3850		4280	
50 PERCENT EXCEEDS	449		409		496	
90 PERCENT EXCEEDS	401		386		17	



## SNAKE RIVER BASIN

## 13011500 PACIFIC CREEK AT MORAN, WY

LOCATION.--Lat 43°51'01", long 110°31'04"(revised), in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> sec.23, T.45 N., R.114 W., Teton County, Grand Teton National Park, Hydrologic Unit 17040101, on left bank 40 ft upstream from bridge on U.S. Highway 287, at Moran, and at mile 0.5.

DRAINAGE AREA.--169 mi<sup>2</sup>. Mean elevation, 8,160 ft.

PERIOD OF RECORD.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1975, July 1978 to current year. Published as "near Moran" prior to October 1968.

GAGE.--Water-stage recorder. Elevation of gage is 6,720 ft above sea level, from topographic map. July 31 to Nov. 11, 1906, nonrecording gage at site 0.4 mi downstream at different datum. July 20, 1917 to Sept. 30, 1918, nonrecording gage at site 0.1 mi downstream at different datum. Sept. 23, 1944 to Nov. 13, 1959, at site 100 ft upstream at same datum. Nov. 14, 1959 to Sept. 24, 1975, at site 35 ft downstream at same datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. No diversion or regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	53	e45	e40	e40	e35	81	713	414	106	45	33
2	55	51	e40	e35	e40	e35	82	509	396	101	43	33
3	54	50	e40	e35	e45	e40	81	383	403	97	42	32
4	53	49	e45	e35	e40	e35	81	404	369	93	44	32
5	52	50	e45	e35	e45	e40	81	529	336	92	47	33
6	52	50	e40	e35	e40	e35	83	571	300	91	43	49
7	51	e45	e40	e30	e40	e35	84	526	273	91	40	51
8	50	e45	e40	e30	e35	e35	83	655	252	91	39	51
9	50	47	e45	e30	e30	e35	e80	843	242	90	39	47
10	51	48	e40	e35	e35	e35	e80	833	227	93	44	44
11	52	e45	e35	e30	e35	e40	e80	848	210	89	41	41
12	53	e45	e35	e35	e35	e40	82	946	244	87	41	40
13	55	e40	e40	e35	e40	e40	80	1110	282	81	40	41
14	56	e40	e40	e35	e35	e35	81	1220	272	84	45	44
15	55	e45	e35	e30	e40	e35	79	1550	318	83	45	48
16	55	e40	e35	e25	e45	e40	85	1980	315	80	50	45
17	54	e45	e40	e20	e40	e40	98	1230	276	73	45	45
18	54	e45	e35	e25	e40	e45	113	974	238	70	41	46
19	55	e45	e30	e30	e45	e60	139	852	215	70	39	43
20	54	e45	e30	e35	e50	e70	140	784	195	65	38	41
21	54	e45	e30	e30	e55	e65	127	620	181	60	38	40
22	54	e45	e35	e30	e50	77	121	580	169	57	37	39
23	53	e45	e35	e30	e50	78	123	602	158	56	35	39
24	54	e45	e40	e30	e45	81	122	620	151	54	34	38
25	56	e45	e35	e35	e40	82	138	629	153	53	33	37
26	55	e50	e35	e30	e35	83	193	690	138	51	32	36
27	55	e50	e35	e30	e30	81	289	639	130	50	32	36
28	54	e45	e35	e30	e30	80	380	674	122	48	31	36
29	54	e40	e35	e35	---	80	508	576	115	47	31	36
30	54	e45	e40	e35	---	80	550	506	110	46	31	36
31	54	---	e40	e35	---	e80	---	442	---	45	32	---
TOTAL	1659	1378	1170	990	1130	1672	4344	24038	7204	2294	1217	1212
MEAN	53.5	45.9	37.7	31.9	40.4	53.9	145	775	240	74.0	39.3	40.4
MAX	56	53	45	40	55	83	550	1980	414	106	50	51
MIN	50	40	30	20	30	35	79	383	110	45	31	32
AC-FT	3290	2730	2320	1960	2240	3320	8620	47680	14290	4550	2410	2400
CFSM	.32	.27	.22	.19	.24	.32	.86	4.59	1.42	.44	.23	.24
IN.	.37	.30	.26	.22	.25	.37	.96	5.29	1.59	.50	.27	.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2001, BY WATER YEAR (WY)

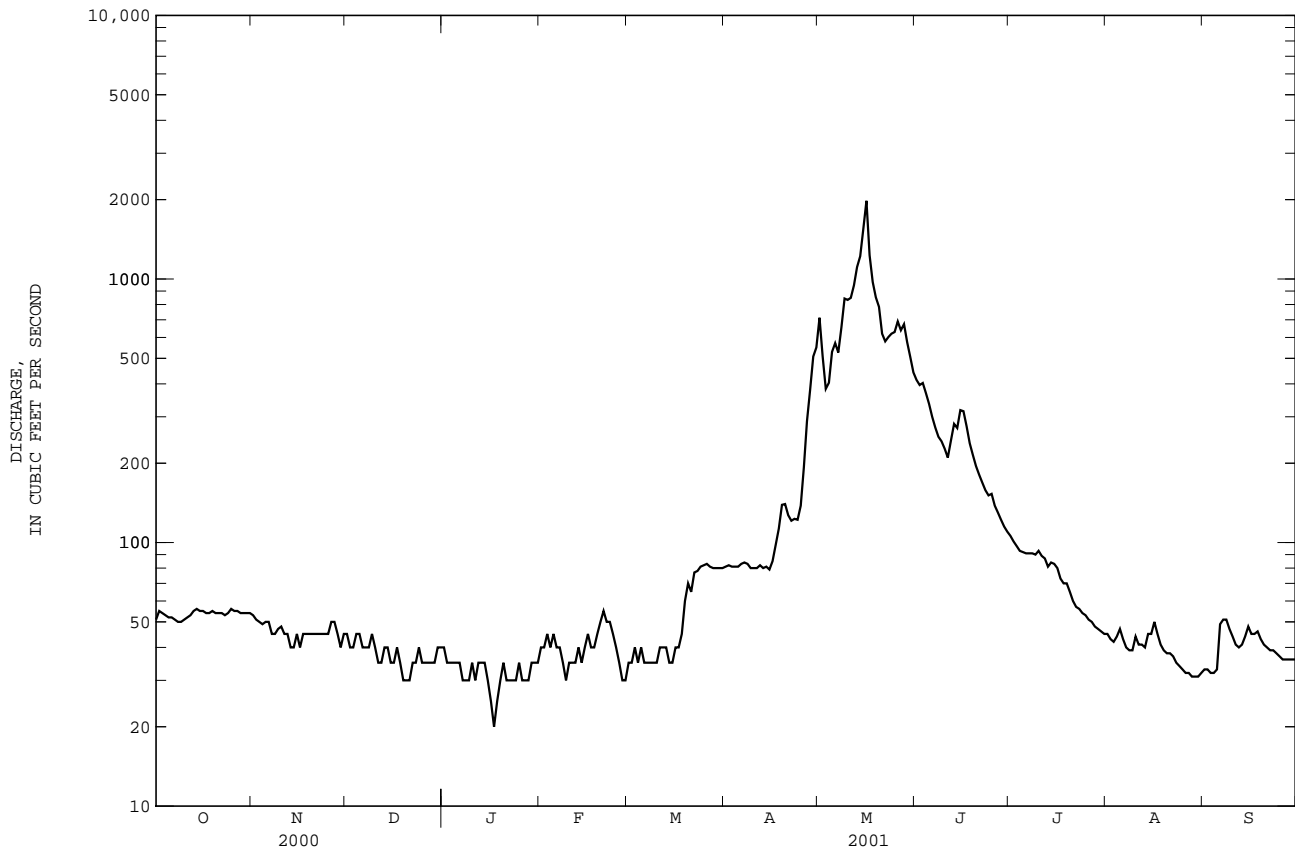
	MEAN	65.2	54.6	48.7	44.6	46.0	52.8	156	978	1267	345	97.8	71.1
MAX	142	105	93.5	70.7	72.2	94.5	418	2314	2884	1527	191	127	
(WY)	1973	1973	1984	1951	1995	1972	1946	1997	1997	1982	1982	1972	
MIN	34.6	32.6	29.7	25.3	26.6	34.6	53.3	345	238	70.0	39.3	37.2	
(WY)	1988	1953	1955	1979	1955	1963	1970	1975	1994	1994	2001	1994	



## 13011500 PACIFIC CREEK AT MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1917 - 2001	
ANNUAL TOTAL	89123		48308		--	
ANNUAL MEAN	244		132		269	
HIGHEST ANNUAL MEAN	--		--		560	1997
LOWEST ANNUAL MEAN	--		--		132	1994
HIGHEST DAILY MEAN	2680	May 26	1980	May 16	4170	Jun 1 1997
LOWEST DAILY MEAN	30	Dec 19-21	20	Jan 17	19	Dec 31 1978
ANNUAL SEVEN-DAY MINIMUM	34	Dec 15	28	Jan 15	23	Jan 6 1993
ANNUAL RUNOFF (AC-FT)	176800		95820		194900	
10 PERCENT EXCEEDS	835		381		919	
50 PERCENT EXCEEDS	55		47		66	
90 PERCENT EXCEEDS	40		35		39	

e Estimated.



## SNAKE RIVER BASIN

13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY

LOCATION.--Lat 43°50'17", long 110°26'28"(revised), in SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.29, T.45 N., R.113 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank below bridge on U.S. Highway 26/287, about 2 mi upstream from Lava Creek, 3.5 mi east of Moran, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--323 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1965 to current year. July to November 1906, July 1917 to September 1918, and September 1944 to September 1960 at sites about 3 mi downstream.

REVISED RECORDS.--WDR Idaho 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,772.78 ft above sea level (Federal Highway Administration bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	172	e140	e130	e120	e100	125	563	1350	498	195	155
2	260	156	e130	e120	e120	e100	125	443	1550	477	191	148
3	235	e140	e130	e120	e130	e110	116	358	1180	437	189	143
4	209	e140	e140	e120	e120	e100	116	328	891	418	196	143
5	199	e150	e140	e120	e130	e110	114	410	755	403	200	145
6	189	e140	e130	e120	e120	e100	120	481	664	393	188	174
7	182	e140	e130	e110	e120	e100	119	451	641	378	182	179
8	180	e140	e130	e100	e110	e100	119	533	783	358	179	177
9	179	e150	e140	e110	e90	e100	104	748	1010	496	177	168
10	183	e140	e130	e120	e100	e100	103	772	1230	386	193	161
11	192	e140	e120	e110	e100	e100	109	824	1190	383	183	152
12	195	e140	e120	e120	e100	e110	115	952	1070	344	178	148
13	196	e130	e130	e120	e110	e110	106	1140	814	321	175	152
14	201	e130	e130	e120	e100	e100	110	1410	695	322	184	164
15	197	e140	e120	e110	e110	e100	102	1790	689	338	180	165
16	190	e130	e120	e100	e120	e110	113	2300	690	319	182	155
17	190	e140	e130	e80	e110	e110	125	1640	660	292	176	160
18	196	e140	e120	e100	e110	e120	167	1370	714	272	169	164
19	197	e140	e110	e110	e120	e130	208	1190	664	263	165	157
20	189	e140	e110	e120	e130	e140	191	1230	695	256	162	149
21	188	e140	e110	e110	e130	e120	166	883	727	245	162	141
22	182	e140	e120	e110	e120	e130	149	815	794	237	163	139
23	175	e140	e120	e110	e120	e130	152	967	863	230	162	138
24	182	e140	e130	e110	e110	e140	151	1250	850	227	159	137
25	204	e140	e120	e120	e100	e140	167	1430	962	219	156	137
26	192	e150	e120	e110	e100	140	232	1720	761	214	149	137
27	186	e150	e120	e100	e90	128	344	1790	685	211	147	137
28	183	e140	e120	e100	e90	118	414	1760	640	208	146	136
29	180	e130	e120	e100	---	122	496	1490	587	205	144	137
30	178	e140	e130	e110	---	116	505	1430	535	201	144	138
31	176	---	e130	e110	---	105	---	1280	---	198	148	---
TOTAL	5980	4248	3890	3450	3130	3539	5283	33748	25339	9749	5324	4536
MEAN	193	142	125	111	112	114	176	1089	845	314	172	151
MAX	260	172	140	130	130	140	505	2300	1550	498	200	179
MIN	175	130	110	80	90	100	102	328	535	198	144	136
AC-FT	11860	8430	7720	6840	6210	7020	10480	66940	50260	19340	10560	9000
CFSM	.60	.44	.39	.34	.35	.35	.55	3.37	2.61	.97	.53	.47
IN.	.69	.49	.45	.40	.36	.41	.61	3.89	2.92	1.12	.61	.55

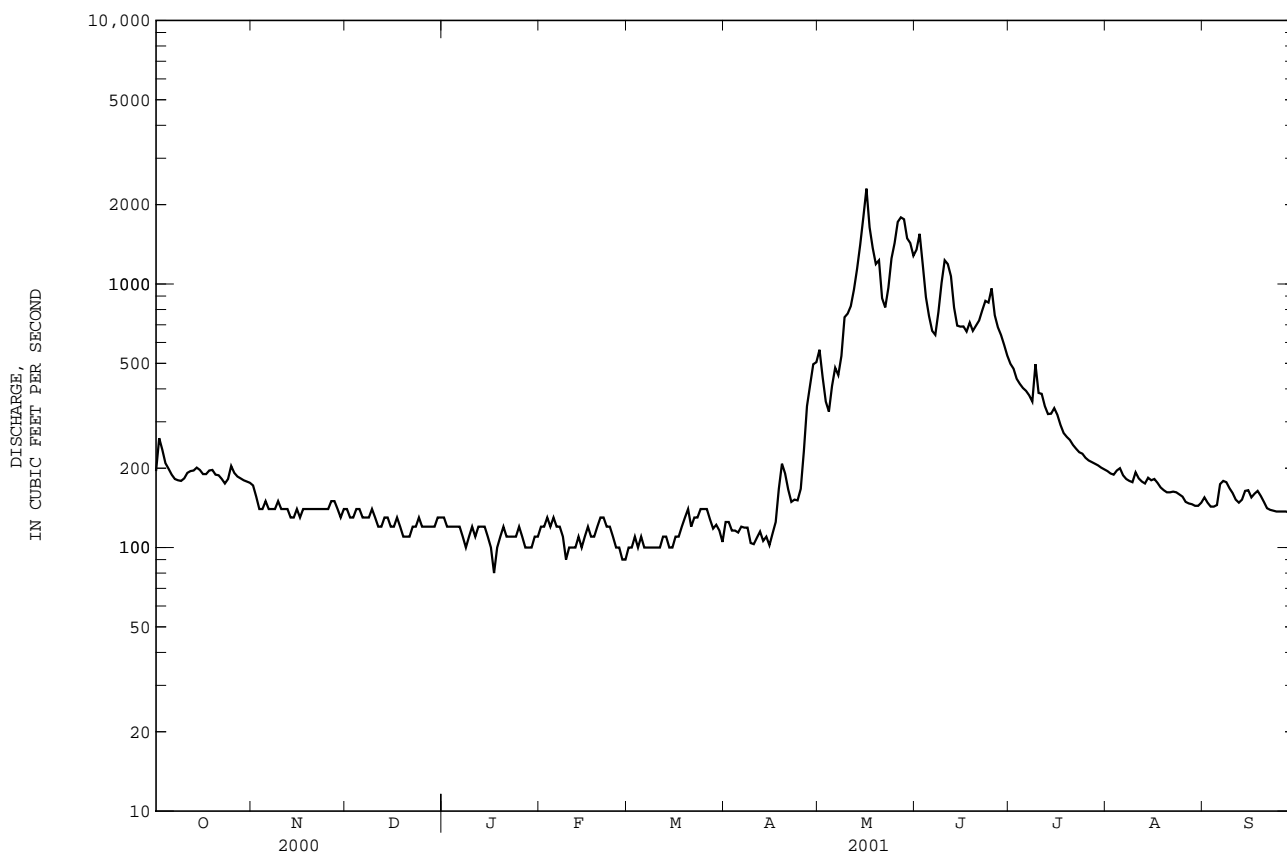
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

MEAN	216	172	140	122	118	126	219	1029	2300	1356	421	260
MAX	304	229	180	145	191	175	367	1768	4533	3056	946	428
(WY)	1973	1984	1985	1994	1984	1984	1987	1969	1997	1975	1982	1982
MIN	128	122	99.5	87.3	93.1	98.5	124	397	845	230	163	135
(WY)	1988	1988	1980	1989	1969	1995	1967	1975	2001	1977	1977	1994

## 13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1966 - 2001	
ANNUAL TOTAL	175824		108216		--	
ANNUAL MEAN	480		296		541	
HIGHEST ANNUAL MEAN	--		--		890	1997
LOWEST ANNUAL MEAN	--		--		286	1977
HIGHEST DAILY MEAN	3430	Jun 8	2300	May 16	5880	Jun 9 1981
LOWEST DAILY MEAN	80	Jan 31	80	Jan 17	73	Jan 25 1989
ANNUAL SEVEN-DAY MINIMUM	99	Jan 28	99	Feb 24	81	Jan 23 1989
ANNUAL RUNOFF (AC-FT)	348700		214600		391900	
10 PERCENT EXCEEDS	1390		765		1650	
50 PERCENT EXCEEDS	190		149		193	
90 PERCENT EXCEEDS	110		110		112	

e Estimated.



## SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY

LOCATION.--Lat 43°39'14", long 110°42'52", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.36, T.43 N., R.116 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank at downstream side of bridge on Teton Park Road, 0.2 miles east of Grand Teton National Park Headquarters visitor Center at Moose, and 0.3 miles west of U.S. Highway 191.

DRAINAGE AREA.--1,677 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1995 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,431.12 ft above sea level, by survey.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

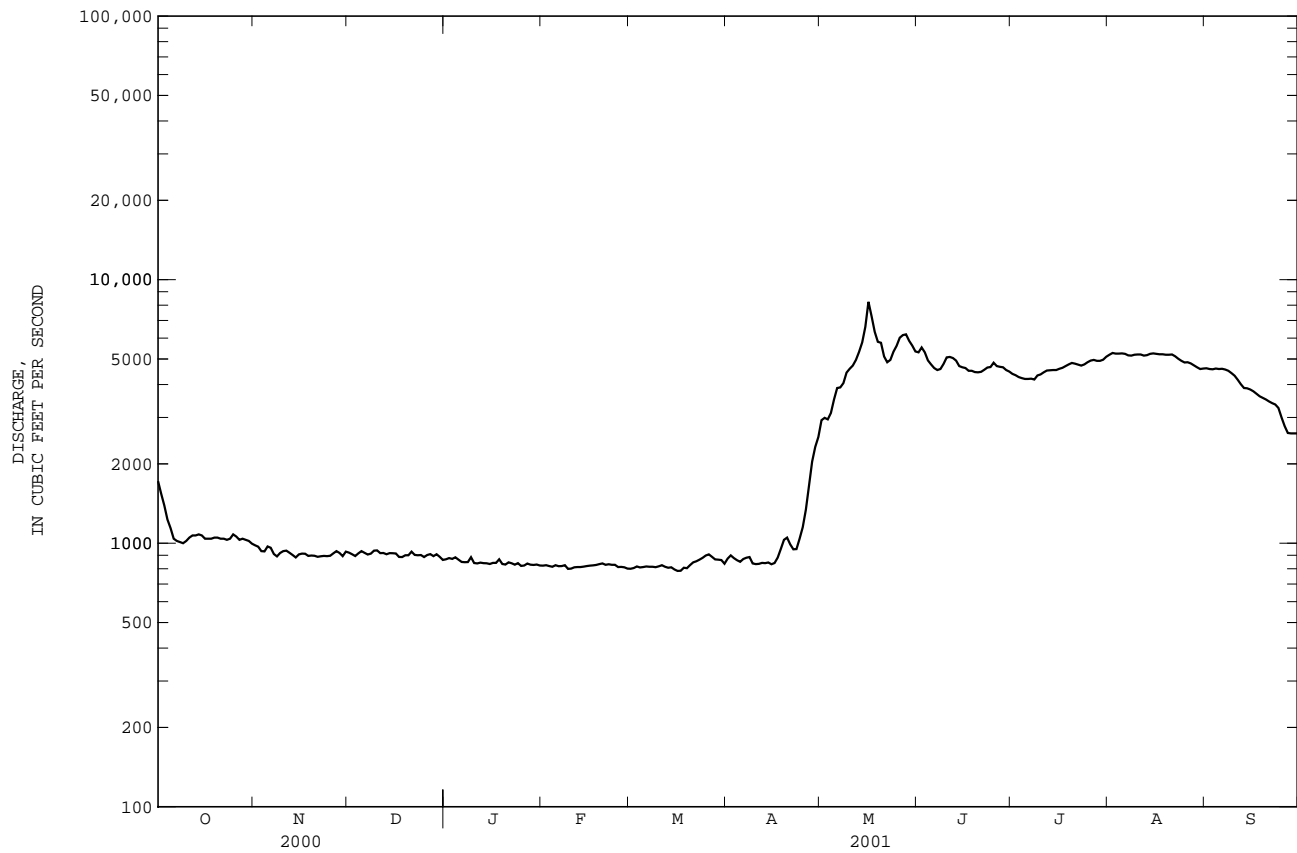
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1720	982	921	869	822	800	874	2930	5300	4390	5190	4610
2	1540	970	908	878	825	805	899	2990	5530	4340	5270	4580
3	1390	933	894	872	819	816	878	2950	5300	4270	5240	4570
4	1230	931	915	884	814	809	862	3120	4940	4230	5240	4600
5	1140	972	933	866	825	812	850	3510	4770	4200	5250	4580
6	1040	961	919	849	818	816	871	3880	4620	4200	5230	4590
7	1020	910	906	847	819	814	881	3900	4540	4210	5160	4560
8	1010	891	913	848	825	814	886	4050	4580	4180	5150	4510
9	1000	918	937	885	799	811	838	4440	4790	4330	5190	4420
10	1020	933	939	841	801	817	833	4490	5070	4370	5200	4320
11	1050	937	917	838	810	825	835	4720	5090	4450	5200	4170
12	1070	920	918	844	812	814	842	4960	5040	4520	5150	4010
13	1070	902	908	840	812	807	840	5320	4930	4530	5170	3880
14	1080	883	917	839	815	810	845	5780	4700	4540	5230	3870
15	1070	907	916	834	819	795	832	6620	4650	4540	5250	3830
16	1040	913	914	842	822	785	841	8240	4620	4590	5230	3770
17	1040	912	887	842	824	786	882	7260	4510	4630	5210	3690
18	1040	895	886	869	827	807	951	6340	4510	4700	5210	3610
19	1050	898	900	834	833	804	1030	5810	4460	4770	5190	3560
20	1050	896	900	830	838	826	1050	5760	4450	4830	5190	3510
21	1040	888	929	846	828	846	990	5110	4470	4800	5200	3450
22	1040	892	903	839	832	854	948	4860	4550	4760	5120	3400
23	1030	895	900	829	828	866	950	4960	4640	4720	5010	3360
24	1040	893	902	840	828	880	1040	5330	4660	4770	4920	3260
25	1080	896	886	820	812	898	1150	5610	4840	4860	4850	3000
26	1060	915	902	823	813	907	1340	6020	4700	4930	4860	2780
27	1030	933	909	837	810	888	1650	6160	4670	4960	4810	2620
28	1040	918	893	829	801	868	2040	6200	4650	4920	4730	2610
29	1030	893	908	827	---	866	2320	5860	4540	4920	4650	2610
30	1020	929	888	830	---	863	2530	5620	4480	4970	4580	2610
31	996	---	864	823	---	836	---	5340	---	5100	4600	---
TOTAL	34076	27516	28132	26194	22931	25745	32578	158240	142600	142530	157480	112940
MEAN	1099	917	907	845	819	830	1086	5105	4753	4598	5080	3765
MAX	1720	982	939	885	838	907	2530	8240	5530	5100	5270	4610
MIN	996	883	864	820	799	785	832	2930	4450	4180	4580	2610
AC-FT	67590	54580	55800	51960	45480	51070	64620	313900	282800	282700	312400	224000

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

MEAN	1531	1137	1061	1112	1220	1583	2626	6234	11210	6213	4130	3595
MAX	2124	1382	1315	1615	2083	3205	4600	8620	18150	7574	5080	5089
(WY)	1998	1998	1998	1997	1997	1997	1997	1997	1997	1997	2001	1998
MIN	1099	917	907	845	819	830	1086	2531	4753	3439	2433	2096
(WY)	2001	2001	2001	2001	2001	2001	2001	1995	2001	2000	2000	2000

13013650 SNAKE RIVER AT MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1995 - 2001	
ANNUAL TOTAL	912730		910962		--	
ANNUAL MEAN	2494		2496		3547	
HIGHEST ANNUAL MEAN	--		--		4874	1997
LOWEST ANNUAL MEAN	--		--		2496	2001
HIGHEST DAILY MEAN	11800	May 30	8240	May 16	24500	Jun 11 1997
LOWEST DAILY MEAN	864	Dec 31	785	Mar 16	785	Mar 16 2001
ANNUAL SEVEN-DAY MINIMUM	893	Dec 25	799	Mar 13	799	Mar 13 2001
MAXIMUM PEAK FLOW	--		9220	May 16	25300	Jun 11 1997
MAXIMUM PEAK STAGE	--		11.75	May 16	15.25	Jun 11 1997
10 PERCENT EXCEEDS	5660		5180		8230	
50 PERCENT EXCEEDS	1140		1040		2180	
90 PERCENT EXCEEDS	910		823		940	



## SNAKE RIVER BASIN

13013650 SNAKE RIVER AT MOOSE, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1995 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

		DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT 30...	1430	1020	598	10.0	107	8.8	193	5.0	7.5	79	23.4	4.97	1.89
DEC 11...	1410	932	600	11.7	105	8.4	197	-8.0	1.0	81	24.1	5.13	1.73
FEB 20...	1230	850	602	12.6	122	8.5	199	4.0	4.0	83	24.6	5.21	.57
APR 20...	1115	1090	593	10.5	110	8.6	202	8.5	6.5	88	26.1	5.46	1.73
JUN 26...	1030	4800	605	8.7	104	8.4	140	22.5	13.0	51	15.1	3.09	1.61
AUG 06...	1700	5030	610	8.0	110	8.5	165	30.0	19.5	53	16.0	3.29	1.88
DATE	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT 30...	.4	7.8	86	4.3	2.3	14.9	10.8	.17	339	123	122	<.041	.11
DEC 11...	.4	8.1	82	4.9	.7	16.0	10.2	.16	292	116	120	<.041	E.06
FEB 20...	.4	8.4	86	--	.5	15.6	--	--	--	126	--	<.041	E.04
APR 20...	.3	7.5	92	4.0	.4	15.0	11.1	.18	380	129	127	<.041	.14
JUN 26...	.5	8.1	55	3.7	.6	13.8	8.4	.13	1210	93	88	<.040	E.07
AUG 06...	.6	10.7	61	5.6	.8	14.5	10.5	.14	1360	100	100	<.040	.08
DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	2,6-DI-ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA-CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS-SOLVED (UG/L) (34253)	ATRA-ZINE, WATER, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)
OCT 30...	<.047	<.018	<.060	1.1	.3	<10	<3.2	<.002	<.004	<.002	<.005	<.007	<.010
DEC 11...	E.024	E.011	E.036	.96	.3	<10	<3.2	--	--	--	--	--	--
FEB 20...	E.024	E.012	<.060	1.0	.4	<10	E2.1	--	--	--	--	--	--
APR 20...	<.047	E.012	<.060	1.5	--	M	4.2	--	--	--	--	--	--
JUN 26...	<.050	<.020	<.060	1.3	1.4	<10	<3.0	<.002	<.004	<.002	<.005	<.007	<.010
AUG 06...	E.028	<.020	<.060	1.6	.3	<10	<3.0	--	--	--	--	--	--
DATE	BUTYL-ATE, WATER, DISS, REC (UG/L) (04028)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	CYANA-ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	DI-ELDRIN DIS-SOLVED (UG/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO-PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)
OCT 30...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 26...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.021	<.002	<.009	<.005
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

## 13013650 SNAKE RIVER AT MOOSE, WY--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	FEB- ULATE WATER FLTRD 0.7 U GF, REC (UG/L) (82669)
OCT 30...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 26...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)
OCT 30...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 26...	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011	<.016	<.034	<.005	<.002
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 30...	<.009	2	5.5
DEC 11...	--	3	7.5
FEB 20...	--	5	11
APR 20...	--	14	41
JUN 26...	<.009	14	181
AUG 06...	--	21	285

E -- Estimated value.

M -- Presence verified, not quantified.

## SNAKE RIVER BASIN

13015000 GROS VENTRE RIVER AT ZENITH, WY

LOCATION.--Lat 43°33'26", long 110°45'46"(revised), in SW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> sec.34., T.42 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040102, on left bank, 20 ft upstream from county road bridge, 0.5 mi southwest of Jackson Hole Country Club, and 5.5 mi north of Jackson, Wyoming.

DRAINAGE AREA.--683 mi<sup>2</sup>.

PERIOD OF RECORD.--July to September 1917, July to September 1918 (monthly discharge only, published in WSP 1317), October 1987 to current year (no winter records).

GAGE.--Water-stage recorder. Elevation of gage is 6,260 ft above sea level, from topographic map.

REMARKS.--Records fair. Station equipment includes satellite telemetry. Diversions of about 300 ft<sup>3</sup>/s for irrigation above station. No regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	45	194	202	14	.02	.00
2	---	---	---	---	---	---	47	208	206	14	.00	.00
3	---	---	---	---	---	---	49	176	221	13	.00	.00
4	---	---	---	---	---	---	48	134	187	12	.00	.00
5	---	---	---	---	---	---	46	106	115	11	.00	.00
6	---	---	---	---	---	---	44	128	46	10	.00	.00
7	---	---	---	---	---	---	45	149	20	9.9	.00	.00
8	---	---	---	---	---	---	47	134	23	9.1	.00	.00
9	---	---	---	---	---	---	44	169	26	8.6	.00	.00
10	---	---	---	---	---	---	37	204	17	8.3	.00	.00
11	---	---	---	---	---	---	28	217	18	6.0	.00	.00
12	---	---	---	---	---	---	25	228	29	5.9	.00	.00
13	---	---	---	---	---	---	26	269	33	5.1	.00	.00
14	---	---	---	---	---	---	26	385	30	5.0	.00	.00
15	---	---	---	---	---	---	24	639	28	3.9	.00	.00
16	---	---	---	---	---	---	22	1150	26	3.4	.00	.00
17	---	---	---	---	---	---	22	1400	24	2.8	.00	.00
18	---	---	---	---	---	---	22	896	24	2.2	.00	.00
19	---	---	---	---	---	---	33	665	22	1.5	.00	.00
20	---	---	---	---	---	---	38	551	22	1.5	.00	.00
21	---	---	---	---	---	---	39	450	23	1.1	.00	.00
22	---	---	---	---	---	---	35	272	24	.65	.00	.00
23	---	---	---	---	---	---	32	193	17	.59	.00	.00
24	---	---	---	---	---	---	30	202	24	.59	.00	.00
25	---	---	---	---	---	---	29	293	24	.59	.00	.00
26	---	---	---	---	---	---	34	380	15	.53	.00	.00
27	---	---	---	---	---	---	51	490	15	.26	.00	.00
28	---	---	---	---	---	---	74	530	16	.13	.00	.00
29	---	---	---	---	---	---	102	467	16	.11	.00	.00
30	---	---	---	---	---	---	160	335	15	.08	.00	.00
31	---	---	---	---	---	---	---	257	---	.05	.00	---
TOTAL	---	---	---	---	---	---	1304	11871	1508	151.88	0.02	0.00
MEAN	---	---	---	---	---	---	43.5	383	50.3	4.90	.001	.000
MAX	---	---	---	---	---	---	160	1400	221	14	.02	.00
MIN	---	---	---	---	---	---	22	106	15	.05	.00	.00
AC-FT	---	---	---	---	---	---	2590	23550	2990	301	.04	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2001, BY WATER YEAR (WY)\*

	MEAN	64.9	64.4	29.5	---	---	---	140	870	1226	513	157	71.0
MAX	89.4	81.3	29.5	---	---	---	---	231	2954	3189	1410	406	215
(WY)	1990	1990	1988	---	---	---	---	2000	1997	1997	1995	1917	1997
MIN	50.3	49.2	29.5	---	---	---	---	41.1	293	50.3	4.90	.001	.000
(WY)	1988	1988	1988	---	---	---	---	1993	1995	2001	2001	2001	1994



13015000 GROS VENTRE RIVER AT ZENITH, WY--Continued

## SUMMARY STATISTICS

FOR 2001 WATER YEAR\*

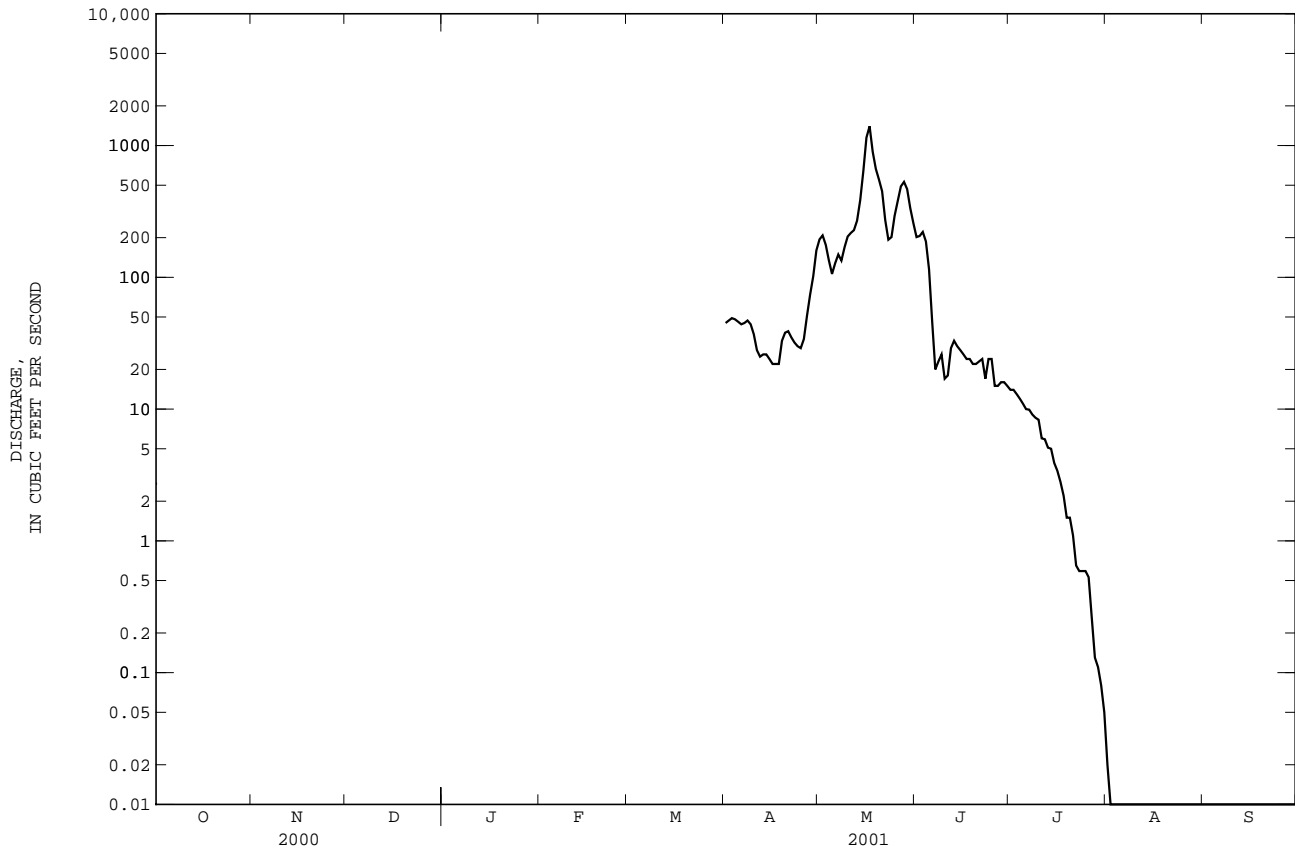
WATER YEARS 1917 - 2001\*

HIGHEST DAILY MEAN  
LOWEST DAILY MEAN1400 May 17  
.00 Many days6170 Jun 6 1997  
.00 Many days,  
some years  
22.77 Jun 10 1996

INSTANTANEOUS PEAK STAGE

--

\* For period of operation.



LOCATION.--Lat 43°36'14", long 110°48'17", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.18, T.42 N., R.116 W., Teton County, Hydrologic Unit 17040103, Grand Teton National Park, on right bank 0.7 mi upstream from Granite Creek Supplemental, and 5.7 mi southwest of Moose.

PERIOD OF RECORD.--June 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,400 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. No diversions upstream from station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	7.0	5.5	e1.9	e1.7	e1.7	4.9	40	187	49	19	8.2
2	6.5	e7.0	5.5	e1.8	e1.8	e1.8	4.9	36	187	47	18	7.7
3	6.4	e6.6	e5.4	e1.8	e2.0	e2.0	4.8	32	146	45	18	7.5
4	6.4	e6.4	5.5	e1.7	e1.9	e2.0	4.8	29	108	43	18	7.3
5	6.4	e6.5	5.5	e1.8	e2.4	e2.2	4.8	34	93	42	18	7.6
6	6.3	e6.5	5.3	e1.9	e1.9	e2.5	4.8	35	83	40	18	8.7
7	6.2	e6.2	5.4	e1.7	e2.0	e2.7	4.9	37	83	38	e17	8.3
8	6.1	e5.8	5.3	e1.6	e1.7	e2.9	5.0	46	97	47	e12	8.0
9	6.1	e6.1	5.4	e1.5	e1.6	e2.9	6.4	58	117	41	12	7.6
10	6.8	e3.6	5.4	e1.6	e1.8	e2.9	5.8	61	124	38	12	7.3
11	7.2	e3.7	5.4	e1.6	e1.9	e3.2	5.8	70	120	36	12	7.0
12	6.7	e3.9	e4.8	e1.7	e1.7	e3.3	4.8	87	115	34	11	7.0
13	7.3	e4.2	e3.8	e1.8	e1.8	e3.2	5.0	114	94	32	11	7.2
14	6.9	e4.4	e4.3	e1.8	e1.6	e3.3	4.8	138	82	32	11	7.3
15	6.9	e4.7	e4.5	e1.8	e1.5	e3.4	5.4	208	75	31	11	7.0
16	6.7	e5.3	e3.4	e1.7	e1.6	e3.4	4.9	446	73	29	11	6.8
17	6.7	e5.4	e3.5	e1.5	e1.6	e3.6	5.2	247	77	28	10	6.7
18	6.8	e4.9	e3.5	e1.5	e1.6	4.0	6.6	192	81	27	10	6.6
19	7.0	e5.2	e2.8	e1.6	e1.7	4.1	9.9	172	80	27	9.7	6.5
20	7.1	e5.4	e2.6	e1.7	e1.7	4.4	9.6	174	80	26	9.6	6.4
21	7.2	e5.4	e2.4	e1.6	e1.7	4.3	8.5	121	81	25	9.5	6.4
22	6.9	e5.6	e2.4	e1.6	e1.7	4.3	8.2	118	82	25	9.2	6.3
23	6.8	5.6	e2.7	e1.6	e1.7	4.4	8.2	156	82	24	9.0	6.2
24	7.1	5.6	e2.3	e1.5	e1.8	4.5	8.4	202	83	23	8.8	6.1
25	7.5	5.5	e2.2	e1.6	e1.7	4.8	9.9	239	83	22	8.5	6.0
26	7.2	5.5	e2.0	e1.6	e1.7	4.8	15	254	71	22	8.3	6.0
27	7.1	5.6	e2.0	e1.5	e1.9	4.8	22	247	65	21	8.2	6.0
28	7.1	5.5	e2.0	e1.5	e1.8	4.9	30	230	62	21	8.0	5.9
29	7.1	5.5	e2.0	e1.4	---	4.8	37	194	57	20	7.9	6.0
30	7.1	5.7	e2.0	e1.5	---	4.7	36	181	53	20	7.9	6.0
31	6.9	---	e2.1	e1.6	---	5.1	---	170	---	19	8.6	---
TOTAL	211.0	164.3	116.9	51.0	49.5	110.9	296.3	4368	2821	974	362.2	207.6
MEAN	6.81	5.48	3.77	1.65	1.77	3.58	9.88	141	94.0	31.4	11.7	6.92
MAX	7.5	7.0	5.5	1.9	2.4	5.1	37	446	187	49	19	8.7
MIN	6.1	3.6	2.0	1.4	1.5	1.7	4.8	29	53	19	7.9	5.9
AC-FT	419	326	232	101	98	220	588	8660	5600	1930	718	412

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

MEAN	10.1	8.50	6.56	5.29	4.60	4.92	10.7	98.7	194	122	29.7	13.6
MAX	16.0	14.5	8.73	8.10	6.32	6.12	16.2	149	349	184	48.7	22.5
(WY)	1998	1998	1998	1998	1999	1999	2000	1997	1997	1998	1997	1997
MIN	6.81	5.48	3.77	1.65	1.77	3.46	8.54	52.2	94.0	31.4	11.7	6.92
(WY)	2001	2001	2001	2001	2001	1996	1999	1999	2001	2001	2001	2001

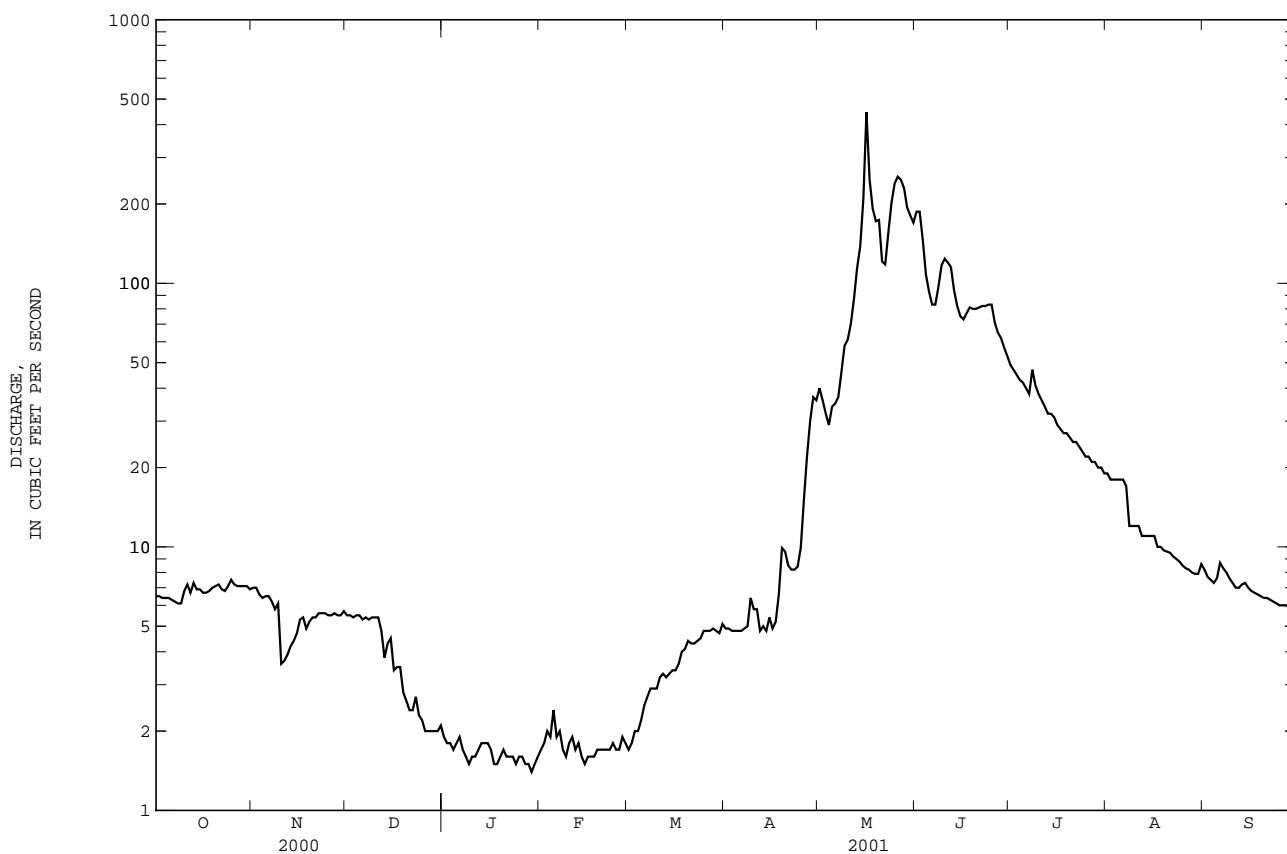
13016305 GRANITE CREEK ABOVE GRANITE CREEK SUPPLEMENTAL, NEAR MOOSE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1995 - 2001	
ANNUAL TOTAL	11857.0		9732.7		--	
ANNUAL MEAN	32.4		26.7		41.5	
HIGHEST ANNUAL MEAN	--		--		63.2	
LOWEST ANNUAL MEAN	--		--		26.7	
HIGHEST DAILY MEAN	300	May 29	446	May 16	490	Jun 9 1997
LOWEST DAILY MEAN	2.0	Dec 26	1.4	Jan 29	1.2	Jan 9 1996
ANNUAL SEVEN-DAY MINIMUM	2.0	Dec 25	1.5	Jan 24	1.3	Jan 5 1996
MAXIMUM PEAK FLOW	--		599 <sup>a</sup>		599 <sup>a</sup>	
MAXIMUM PEAK STAGE	--		5.60 <sup>b</sup>		6.58	
ANNUAL RUNOFF (AC-FT)	23520		19300		30070	
10 PERCENT EXCEEDS	112		82		155	
50 PERCENT EXCEEDS	7.1		6.5		9.9	
90 PERCENT EXCEEDS	4.6		1.7		4.3	

a Gage height, 5.02 ft.

b Discharge, 375 ft<sup>3</sup>/s.

e Estimated.



## SNAKE RIVER BASIN

13016450 FISH CREEK AT WILSON, WY

LOCATION.--Lat 43°30'03", long 110°52'15", in NW<sup>1</sup>/<sub>4</sub> NW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.22, T.41 N., R.117 W., Teton County, Hydrologic Unit 17040103, on left bank 20 ft downstream from bridge on Fish Creek Road (County Road 3) in Wilson.

DRAINAGE AREA.--71.1 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversion from Snake River through Granite Creek Supplemental for irrigation in Fish Creek Basin and by additional diversions upstream from station within Fish Creek Basin. See station 13016305.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	105	48	37	33	32	55	50	483	364	336	313
2	201	105	48	37	32	32	55	51	533	345	339	313
3	183	102	48	37	32	32	54	53	551	323	347	300
4	164	99	48	37	32	31	53	54	504	316	355	293
5	149	92	47	37	32	31	53	56	447	306	351	297
6	138	93	46	36	32	31	53	61	420	300	349	318
7	129	88	46	36	32	31	53	63	391	302	355	308
8	122	84	46	e35	32	31	53	68	398	306	350	303
9	116	86	45	e34	e32	31	51	91	399	313	350	295
10	117	88	43	e36	31	31	50	106	430	317	351	291
11	122	84	43	e36	32	31	50	109	449	311	341	280
12	123	80	43	37	32	31	49	142	467	308	343	279
13	133	74	43	36	32	32	49	192	480	310	343	290
14	135	72	43	35	32	32	49	275	449	304	340	282
15	130	64	43	35	32	32	48	365	417	299	340	294
16	126	61	42	35	32	32	48	608	391	298	343	278
17	124	60	42	e34	32	32	48	600	377	290	337	272
18	121	59	41	e34	31	32	48	498	371	288	332	285
19	116	58	41	34	31	33	48	453	369	289	326	269
20	111	58	41	34	32	37	48	435	369	286	329	255
21	109	57	41	35	31	43	48	383	369	277	331	244
22	107	54	41	34	31	46	47	343	374	260	328	233
23	114	54	40	34	31	49	47	331	383	259	321	226
24	121	53	40	34	31	53	47	352	396	257	319	219
25	124	52	39	34	32	53	46	383	420	262	315	202
26	122	51	39	34	31	54	46	451	418	310	312	186
27	117	51	40	34	32	54	46	494	404	328	310	171
28	114	50	40	34	32	52	47	527	392	334	301	160
29	112	50	40	34	---	52	47	504	379	334	298	152
30	109	49	39	34	---	53	49	475	371	333	297	153
31	106	---	38	33	---	52	---	466	---	331	304	---
TOTAL	4036	2133	1324	1086	889	1198	1485	9039	12601	9460	10293	7761
MEAN	130	71.1	42.7	35.0	31.8	38.6	49.5	292	420	305	332	259
MAX	221	105	48	37	33	54	55	608	551	364	355	318
MIN	106	49	38	33	31	31	46	50	369	257	297	152
AC-FT	8010	4230	2630	2150	1760	2380	2950	17930	24990	18760	20420	15390

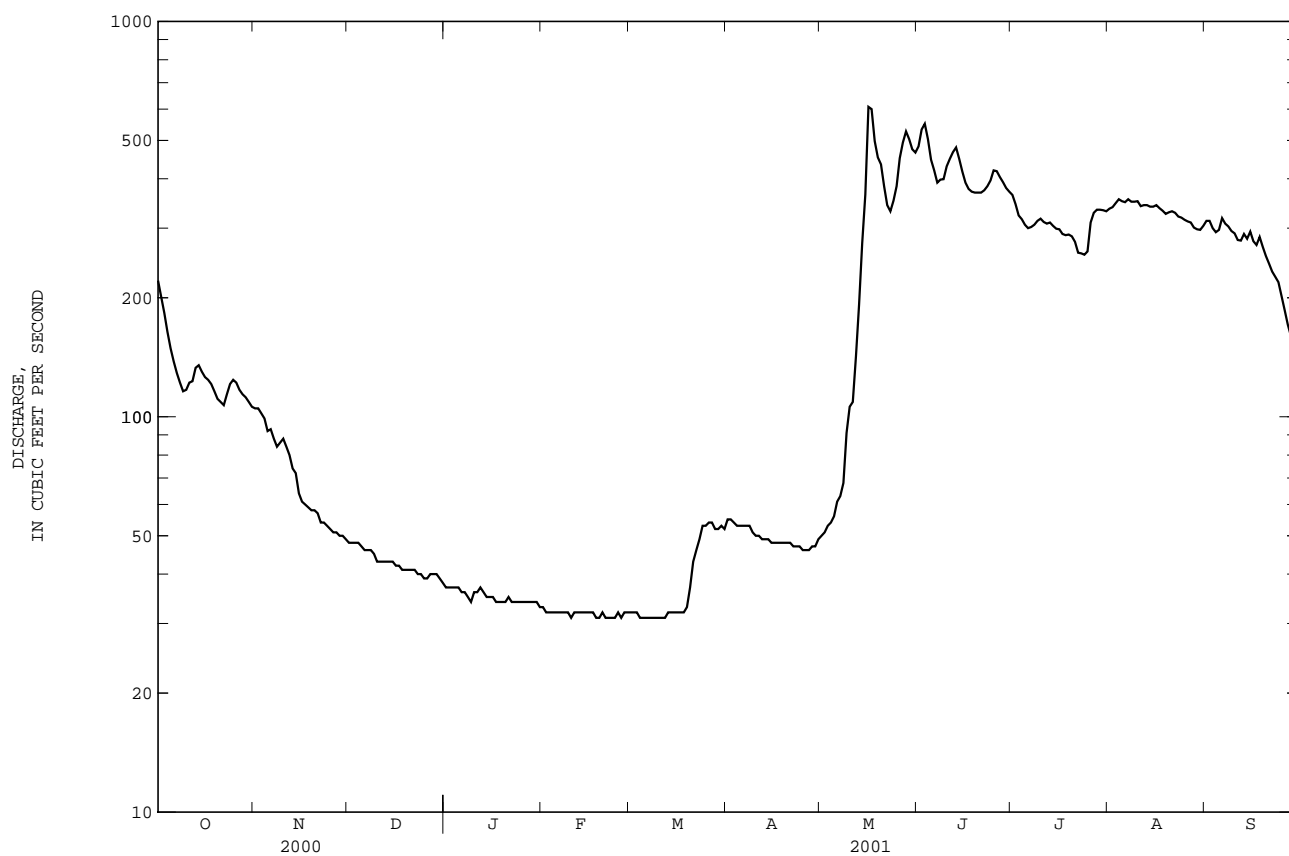
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	94.9	57.0	46.1	42.5	39.7	44.3	74.1	242
MAX	130	71.1	57.3	57.3	45.0	51.1	102	377
(WY)	2001	2001	1996	1997	1997	1997	1997	1999
MIN	69.7	48.3	40.1	35.0	31.8	38.6	49.5	139
(WY)	1995	1995	1999	2001	2001	2001	2001	1995

## 13016450 FISH CREEK AT WILSON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1994 - 2001	
ANNUAL TOTAL	63989		61305		--	
ANNUAL MEAN	175		168		182	
HIGHEST ANNUAL MEAN	--		--		222	
LOWEST ANNUAL MEAN	--		--		161	
HIGHEST DAILY MEAN	674	Jun 8	608	May 16	1350	Jun 9,10 1997
LOWEST DAILY MEAN	37	Feb 6-14	31	Feb 10,18,19, 21-24,26, Mar 4-12	31	Feb 10,18,19, 24-24,26, Mar 4-12 2001
ANNUAL SEVEN-DAY MINIMUM	37	Feb 6	31	Mar 4	31	Mar 4 2001
MAXIMUM PEAK FLOW	--		686	May 16	1430	Jun 8 1997
MAXIMUM PEAK STAGE	--		3.78	May 16	5.41	Jun 8 1997
INSTANTANEOUS LOW FLOW	--		--		34	Jan 31 1998
ANNUAL RUNOFF (AC-FT)	126900		121600		131700	
10 PERCENT EXCEEDS	404		378		440	
50 PERCENT EXCEEDS	105		88		84	
90 PERCENT EXCEEDS	38		32		39	

e Estimated.



## SNAKE RIVER BASIN

13018300 CACHE CREEK NEAR JACKSON, WY  
(Hydrologic Benchmark Station)

LOCATION.--Lat 43°27'08", long 110°42'12", in SW<sup>1</sup>/<sub>4</sub> SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.1, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, Teton National Forest, on right bank 0.7 mi upstream from Salt Lick Draw, 2.4 mi southeast of Jackson, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--10.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1962 to current year.

REVISED RECORDS.--WDR WY-76-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,750 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.6	7.0	4.6	4.3	3.6	4.2	3.9	9.8	18	10	6.3	4.5
2	e5.4	6.2	4.6	4.3	3.6	4.2	3.9	9.4	17	10	6.1	4.4
3	e5.2	7.1	4.6	4.3	3.7	4.2	4.0	8.5	18	10	6.1	4.1
4	e5.0	7.0	4.6	4.3	3.6	3.7	4.1	8.3	17	10	6.4	4.0
5	e4.9	7.1	4.6	4.2	3.3	3.6	4.1	8.7	16	9.8	6.0	4.1
6	e4.7	6.5	4.6	4.0	3.1	3.6	4.1	8.8	15	10	5.6	4.9
7	e4.4	e6.0	4.6	3.5	3.1	3.6	4.1	8.9	15	9.8	5.6	4.6
8	e4.5	e5.5	4.6	3.4	e3.5	3.6	4.0	9.7	14	9.7	5.6	4.6
9	e4.8	e4.6	4.6	3.3	3.4	3.6	e4.4	11	14	9.4	6.0	4.4
10	e5.3	e4.0	4.6	3.4	3.8	3.6	e4.9	11	14	9.1	6.0	4.1
11	6.1	e3.0	4.4	3.5	3.8	3.5	e5.6	12	14	9.1	5.6	4.0
12	6.0	e2.0	4.3	3.6	4.1	3.5	4.6	13	15	9.1	5.6	3.9
13	6.1	e2.1	4.4	3.6	4.1	3.5	4.5	15	15	8.9	5.3	4.0
14	6.1	e2.2	4.4	3.5	4.1	3.5	4.4	17	14	8.8	5.2	4.3
15	6.1	e2.3	4.4	3.3	4.2	3.2	5.4	22	14	9.3	5.2	4.3
16	6.3	e2.5	4.1	2.9	4.2	3.3	4.4	33	13	9.4	5.2	4.1
17	6.3	2.5	4.3	2.9	4.1	e3.3	4.7	27	13	9.0	5.1	4.0
18	6.3	e2.0	4.3	3.1	4.2	3.2	5.3	24	13	8.2	4.9	3.9
19	6.4	e1.7	4.3	3.2	4.3	3.2	5.8	23	12	7.9	4.7	3.8
20	6.5	e1.8	4.3	3.2	4.4	3.3	5.8	22	12	7.8	4.6	3.8
21	6.3	e1.8	4.3	3.2	4.1	3.5	5.7	20	12	7.7	4.6	3.8
22	6.3	e1.9	4.3	3.2	3.8	3.5	5.4	18	12	7.5	4.6	3.8
23	6.4	e1.9	4.3	3.3	3.8	3.5	5.2	18	12	7.5	4.5	3.8
24	6.6	e2.5	4.3	3.4	3.8	3.5	5.2	19	12	7.3	4.3	3.7
25	6.6	e4.4	4.3	3.4	3.5	3.7	5.6	20	12	7.3	4.3	3.6
26	6.6	5.4	4.3	3.2	3.6	3.9	6.6	20	12	7.3	4.2	3.6
27	6.8	5.2	4.3	3.3	e4.0	3.7	7.7	20	11	7.1	4.2	3.6
28	6.8	5.0	4.3	3.3	3.7	3.4	9.0	20	11	6.9	4.2	3.6
29	6.8	4.7	4.3	3.3	---	3.6	10	19	11	6.7	4.3	3.6
30	6.8	4.6	4.3	3.4	---	3.6	10	19	11	6.6	4.3	3.6
31	7.1	---	4.3	3.6	---	3.9	---	18	---	6.3	4.7	---
TOTAL	185.1	120.5	136.5	108.4	106.5	111.2	162.4	513.1	409	263.5	159.3	120.5
MEAN	5.97	4.02	4.40	3.50	3.80	3.59	5.41	16.6	13.6	8.50	5.14	4.02
MAX	7.1	7.1	4.6	4.3	4.4	4.2	10	33	18	10	6.4	4.9
MIN	4.4	1.7	4.1	2.9	3.1	3.2	3.9	8.3	11	6.3	4.2	3.6
AC-FT	367	239	271	215	211	221	322	1020	811	523	316	239

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2001, BY WATER YEAR (WY)

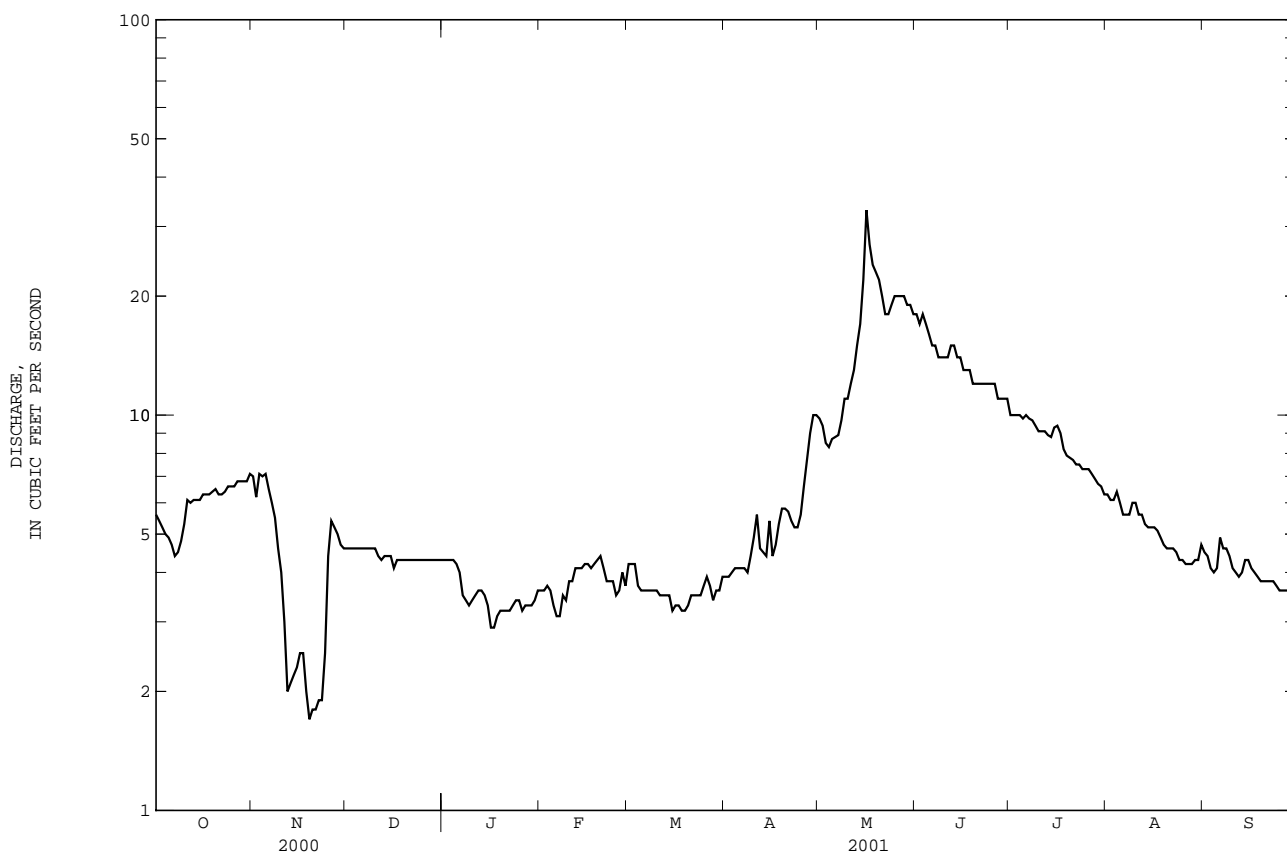
	MEAN	6.83	5.71	5.02	4.35	4.04	4.07	6.51	25.9	49.5	24.1	12.1	8.34
MAX	9.43	7.57	6.85	5.91	6.09	7.25	14.2	52.1	103	42.0	18.5	12.3	
(WY)	1972	1997	1999	1981	1984	1984	1987	1997	1971	1965	1971	1971	
MIN	3.83	3.14	1.53	2.42	2.06	2.23	3.21	5.86	10.6	6.51	4.19	3.83	
(WY)	1993	1978	1991	1978	1992	1991	1991	1977	1992	1977	1992	1992	

13018300 CACHE CREEK NEAR JACKSON, WY--Continued  
(Hydrologic Benchmark Station)

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1962 - 2001	
ANNUAL TOTAL	3473.1		2396.0		--	
ANNUAL MEAN	9.49		6.56		13.0	
HIGHEST ANNUAL MEAN	--		--		20.5	1997
LOWEST ANNUAL MEAN	--		--		5.64	1992
HIGHEST DAILY MEAN	40	May 29,30	33	May 16	161	Jun 24 1971
LOWEST DAILY MEAN	1.7	Nov 19	1.7	Nov 19	1.1	Dec 23 1990
ANNUAL SEVEN-DAY MINIMUM	1.9	Nov 17	1.9	Nov 17	1.3	Dec 20 1990
MAXIMUM PEAK FLOW	--		37	May 16	225 <sup>a</sup>	Jun 24 1971
MAXIMUM PEAK STAGE	--		3.27	May 16	4.30	Jun 10 1996
ANNUAL RUNOFF (AC-FT)	6890		4750		9450	
10 PERCENT EXCEEDS	21		13		33	
50 PERCENT EXCEEDS	6.3		4.6		6.6	
90 PERCENT EXCEEDS	4.4		3.3		3.6	

a Gage height, 3.90 ft.

e Estimated.



## SNAKE RIVER BASIN

13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY

LOCATION.--Lat 43°27'30", long 110°47'46", in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec. 6, T.40 N., R.116 W., Teton County, Hydrologic Unit 17040103, on left bank 8 ft upstream from county bridge on High School Road, 2.1 mi southwest of Post Office in Jackson, and 3.0 mi downstream from Cache Creek.

DRAINAGE AREA.--129 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1989 to September 1996 (no winter records), October 1999 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,130 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	73	e66	e56	e60	e61	65	30	128	59	44	36
2	78	71	e66	e56	e63	e61	63	30	128	55	44	35
3	77	69	e65	e56	e65	62	64	27	136	48	42	35
4	76	69	e65	e58	e66	62	65	27	137	45	34	35
5	76	71	e66	e58	e70	59	69	27	128	44	34	36
6	76	70	e63	e56	e64	60	73	27	114	44	34	46
7	76	69	e63	e54	e56	61	66	26	102	48	34	44
8	75	73	e62	e50	e51	61	66	55	95	59	33	44
9	75	69	e62	e48	e50	62	63	64	95	82	33	43
10	82	69	e62	e50	e53	64	63	69	101	82	34	43
11	96	e70	e60	e51	e55	65	61	73	105	81	35	42
12	91	e68	e58	e51	e54	64	58	77	110	80	38	30
13	93	e67	e62	e54	55	66	59	83	113	81	39	21
14	91	e66	e64	e54	68	68	58	92	111	82	39	20
15	87	e69	e62	e54	68	67	58	110	104	82	38	16
16	81	e67	e60	e52	64	67	59	128	95	83	30	16
17	77	e69	e62	e48	64	67	59	129	81	82	29	17
18	75	e66	e62	e47	63	67	60	120	78	81	28	18
19	73	e65	e61	e49	61	75	63	107	77	80	27	16
20	72	e65	e58	e52	62	120	62	99	76	78	28	16
21	75	e66	e55	e50	61	120	63	88	74	77	29	15
22	74	e68	e60	e50	62	92	61	79	74	75	30	14
23	72	e66	e62	e50	61	79	61	79	74	75	30	15
24	75	e66	e60	e51	61	72	61	79	76	61	30	15
25	79	e69	e60	e51	62	71	61	87	78	52	30	15
26	74	70	e59	e50	61	70	60	111	79	53	30	16
27	71	70	e58	e50	e61	67	60	124	76	52	30	17
28	69	e66	e56	e49	e60	66	57	131	74	52	32	18
29	69	e63	e56	e46	---	64	42	134	73	51	32	18
30	70	70	e57	e50	---	62	32	129	65	52	33	20
31	73	---	e58	e55	---	61	---	126	---	50	36	---
TOTAL	2404	2049	1890	1606	1701	2163	1812	2567	2857	2026	1039	772
MEAN	77.5	68.3	61.0	51.8	60.8	69.8	60.4	82.8	95.2	65.4	33.5	25.7
MAX	96	73	66	58	70	120	73	134	137	83	44	46
MIN	69	63	55	46	50	59	32	26	65	44	27	14
AC-FT	4770	4060	3750	3190	3370	4290	3590	5090	5670	4020	2060	1530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)\*

	MEAN	94.4	83.0	79.6	68.5	70.8	74.3	62.7	99.1	131	116	83.6	56.7
MAX	111	97.7	98.2	85.3	80.4	78.9	70.1	123	218	189	162	84.2	
(WY)	2000	2000	2000	2000	2000	2000	1990	1993	1996	1995	1993	1991	
MIN	77.5	68.3	61.0	51.8	60.8	69.8	55.3	82.1	57.1	58.3	33.5	25.7	
(WY)	2001	2001	2001	2001	2001	2001	1993	1989	1992	1992	2001	2001	



## 13018350 FLAT CREEK BELOW CACHE CREEK, NEAR JACKSON, WY--Continued

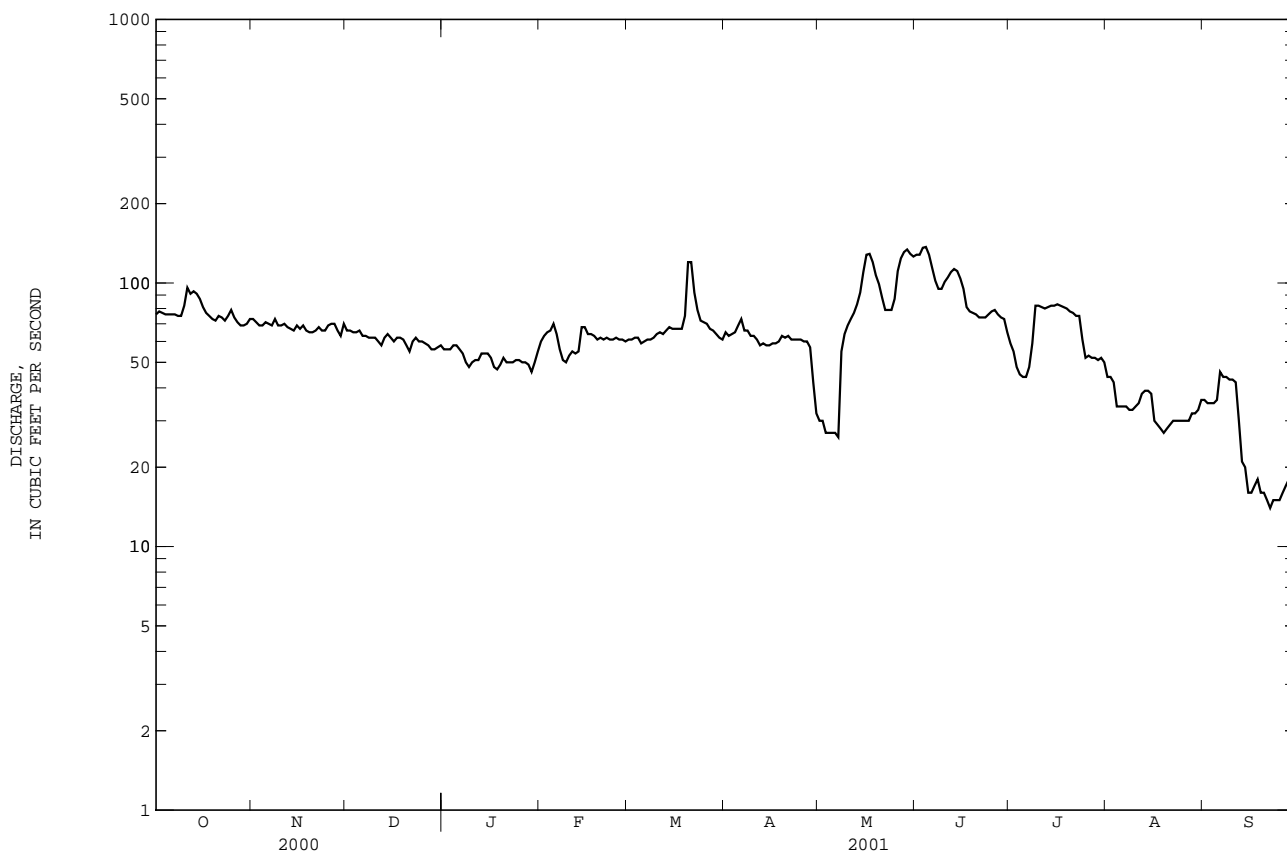
SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1989 - 2001*	
ANNUAL TOTAL	29785		22886		--	
ANNUAL MEAN	81.4		62.7		76.3	
HIGHEST ANNUAL MEAN	--		--		89.8	
LOWEST ANNUAL MEAN	--		--		62.7	
HIGHEST DAILY MEAN	154	May 31	137	Jun 4	256	Jul 13 1995
LOWEST DAILY MEAN	48	Several days	14	Sep 22	14	Sep 22 2001
ANNUAL SEVEN-DAY MINIMUM	48	Apr 25	15	Sep 19	15	Sep 19 2001
MAXIMUM PEAK FLOW	--		165 <sup>a</sup>		277	
MAXIMUM PEAK STAGE	--		2.84 <sup>b</sup>		2.95	
ANNUAL RUNOFF (AC-FT)	59080		45390		55260	
10 PERCENT EXCEEDS	115		89		156	
50 PERCENT EXCEEDS	75		62		75	
90 PERCENT EXCEEDS	60		30		45	

\* For period of operation.

a Gage height, 2.37 ft.

b Backwater from ice.

e Estimated.



LOCATION.--Lat 43°22'20", long 110°44'19" (revised), in NE<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.3, T.39 N., R.116 W., Teton County, Wyoming, Hydrologic Unit 17040103, on left bank 20 ft upstream from county road bridge, about 1 mi downstream from Flat Creek, 4.8 mi upstream from Hoback River. 7.0 mi south of Jackson, and at mile 938.9.

PERIOD OF RECORD.--November 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,950 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

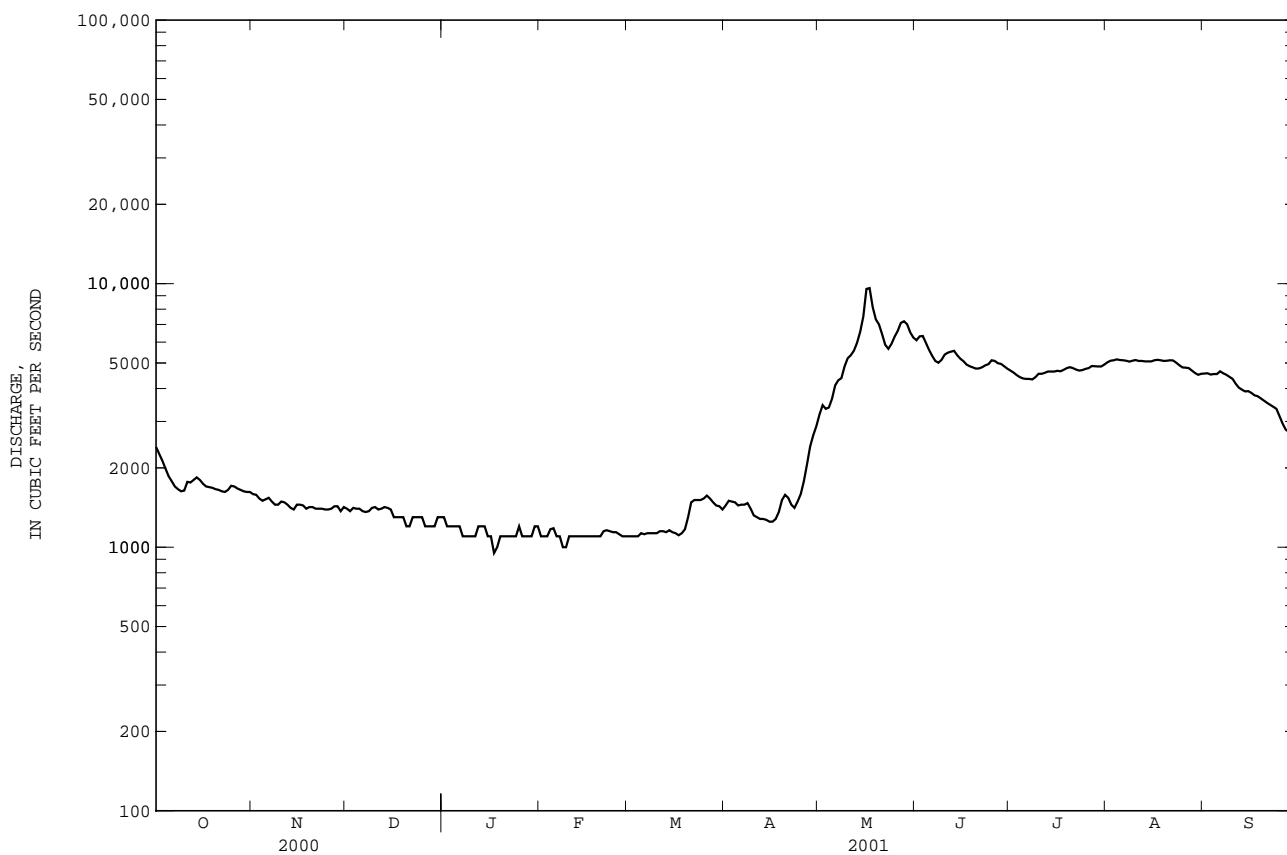
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2400	1590	1400	e1300	e1100	e1100	1440	3190	6100	4680	5030	4560
2	2260	1580	1370	e1200	e1100	e1100	1500	3460	6310	4600	5100	4570
3	2130	1530	1410	e1200	e1100	e1100	1490	3350	6330	4500	5120	4520
4	1990	1500	1400	e1200	1170	e1100	1480	3390	5960	4420	5160	4540
5	1860	1520	1400	e1200	1180	1130	1440	3660	5610	4370	5130	4540
6	1780	1540	1370	e1200	e1100	1120	1450	4110	5320	4350	5120	4650
7	1700	1490	1360	e1100	e1100	1130	1450	4300	5090	4350	5100	4570
8	1660	1450	1370	e1100	e1000	1130	1470	4380	5010	4330	5060	4510
9	1630	1450	1410	e1100	e1000	1130	1400	4850	5140	4420	5100	4430
10	1640	1490	1420	e1100	e1100	1130	1320	5210	5380	4550	5130	4350
11	1770	1480	1390	e1100	e1100	1150	1300	5350	5470	4550	5090	4170
12	1760	1450	1400	e1200	e1100	1150	1280	5570	5520	4590	5090	4030
13	1800	1410	1420	e1200	e1100	1140	1280	5970	5560	4640	5070	3960
14	1840	1390	1410	e1200	e1100	1160	1270	6570	5350	4640	5070	3900
15	1800	1450	1390	e1100	e1100	1140	1250	7510	5190	4640	5070	3910
16	1740	1450	e1300	e1100	e1100	1130	1250	9550	5080	4670	5120	3850
17	1700	1440	e1300	e950	e1100	1110	1280	9620	4930	4650	5140	3770
18	1690	e1400	e1300	e1000	e1100	1130	1360	8140	4860	4710	5120	3740
19	1680	1420	e1300	e1100	e1100	1170	1510	7320	4810	4780	5090	3670
20	1660	1420	e1200	e1100	e1100	1300	1580	7000	4760	4820	5100	3600
21	1650	e1400	e1200	e1100	1150	1480	1540	6430	4770	4780	5120	3530
22	1630	1400	e1300	e1100	1160	1510	1450	5860	4820	4720	5110	3470
23	1620	1400	e1300	e1100	1150	1510	1410	5660	4900	4680	5010	3410
24	1650	1390	e1300	e1100	1140	1510	1490	5910	4950	4700	4900	3350
25	1710	1390	e1300	e1200	1140	1530	1590	6290	5120	4750	4810	3140
26	1700	1400	e1200	e1100	1120	1570	1780	6620	5090	4780	4800	2940
27	1670	1430	e1200	e1100	e1100	1530	2060	7100	4990	4870	4780	2790
28	1650	1430	e1200	e1100	e1100	1480	2410	7200	4960	4860	4680	2740
29	1630	1370	e1200	e1100	---	1440	2660	7010	4860	4850	4580	2720
30	1620	1420	e1300	e1200	---	1430	2880	6530	4760	4850	4510	2720
31	1620	---	e1300	e1200	---	1390	---	6240	---	4930	4550	---
TOTAL	54640	43480	41120	35150	31010	39130	47070	183350	157000	144030	154860	114650
MEAN	1763	1449	1326	1134	1108	1262	1569	5915	5233	4646	4995	3822
MAX	2400	1590	1420	1300	1180	1570	2880	9620	6330	4930	5160</	

MEAN	1883	1570	1413	1330	1359	1625	2696	6889	11250	6792	4335	3454
MAX	3093	2747	1998	2345	2491	3686	5435	12060	22180	14090	7253	6464
(WY)	1983	1984	1984	1997	1997	1997	1985	1997	1997	1982	1976	1984
MIN	977	967	846	879	825	910	1292	2570	5233	3245	2305	1801
(WY)	1989	1988	1988	1988	1989	1977	1977	1977	2001	1988	1981	1979

## 13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1976 - 2001	
ANNUAL TOTAL	1139870		1045490		--	
ANNUAL MEAN	3114		2864		3684	
HIGHEST ANNUAL MEAN	--		--		6110	1997
LOWEST ANNUAL MEAN	--		--		2469	1977
HIGHEST DAILY MEAN	14400	May 30	9620	May 17	30200	Jun 11 1997
LOWEST DAILY MEAN	1200	Dec 20,21, 26-29	950	Jan 17	690	Jan 19 1988
ANNUAL SEVEN-DAY MINIMUM	1240	Dec 23	1060	Jan 15	785	Feb 4 1989
ANNUAL RUNOFF (AC-FT)	2261000		2074000		2669000	
10 PERCENT EXCEEDS	6660		5140		8620	
50 PERCENT EXCEEDS	1860		1640		2100	
90 PERCENT EXCEEDS	1400		1100		1140	

e Estimated.



## SNAKE RIVER BASIN

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY

LOCATION.--Lat 43°11'46", long 110°53'22"(revised), Lincoln County, Wyoming, Hydrologic Unit 17040103, on right bank 0.3 mi downstream from Wolf Creek, 6.4 mi upstream from Greys River, 7.4 mi east of Alpine, 16.1 mi upstream from Palisades Dam, and at mile 917.5.

DRAINAGE AREA.--3,465 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1937 to March 1939 (published as "above Greys River, near Alpine"), July 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,683.90 ft above sea level, unadjusted. Mar. 16, 1937 to Mar. 31, 1939 at site 6.0 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Station equipment includes satellite telemetry. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2710	1840	1620	e1500	e1300	e1300	1730	4440	7530	5320	5400	4870
2	2540	1820	e1600	e1400	e1300	e1300	1820	4610	7770	5220	5480	4860
3	2400	1760	e1600	e1400	e1400	e1300	1800	4340	7740	5090	5500	4810
4	2250	1740	e1600	e1400	e1400	e1300	1770	4280	7200	4980	5550	4810
5	2100	1770	e1600	e1400	e1400	1360	1730	4540	6740	4920	5530	4820
6	2010	1780	e1600	e1400	e1300	1350	1760	5010	6370	4920	5510	4960
7	1930	1720	e1500	e1300	e1300	1360	1780	5260	6090	4920	5490	4870
8	1890	1670	e1500	e1300	e1200	1360	1810	5360	6040	4890	5440	4820
9	1850	1700	e1600	e1300	e1200	1360	1710	5980	6240	4930	5460	4730
10	1860	1720	1650	e1300	e1300	1370	1610	6560	6570	5090	5520	4640
11	2020	1710	1600	e1300	e1300	1400	1600	6700	6740	5170	5470	4480
12	2000	1680	1590	e1400	e1300	1390	1590	6970	6820	5130	5470	4330
13	2050	1630	e1600	e1400	e1300	1380	1570	7520	6770	5170	5470	4260
14	2110	1610	e1600	e1400	e1300	1390	1560	8350	6430	5190	5490	4220
15	2060	1670	e1600	e1300	e1300	1370	1550	9620	6150	5200	5490	4200
16	1980	1650	e1500	e1200	e1300	1360	1560	13200	5990	5250	5540	4170
17	1940	1650	e1500	e1100	e1300	1340	1640	12700	5830	5190	5470	4080
18	1930	1640	e1500	e1200	e1300	1360	1830	10600	5780	5200	5440	4040
19	1920	1630	e1500	e1300	e1300	1390	2070	9440	5710	5260	5410	3980
20	1900	1630	e1400	e1300	e1300	1490	2130	9030	5630	5280	5420	3910
21	1890	1630	e1400	e1300	1400	1680	2030	8140	5630	5240	5440	3840
22	1880	1620	e1500	e1300	1400	1730	1920	7300	5680	5170	5440	3770
23	1850	1610	e1500	e1300	1390	1750	1900	7110	5740	5120	5340	3710
24	1880	1610	e1500	e1300	1380	1770	1950	7490	5810	5130	5170	3660
25	1970	1610	e1500	e1400	1360	1780	2130	8030	6000	5170	5070	3500
26	1950	1620	e1400	e1300	1350	1850	2390	8420	5950	5170	5050	3280
27	1910	1650	e1400	e1300	e1300	1830	2820	8990	5770	5260	5050	3120
28	1890	1650	e1400	e1300	e1300	1760	3380	9050	5710	5270	4970	3030
29	1880	1590	e1400	e1300	---	1720	3900	8780	5580	5260	4870	3000
30	1870	1650	e1500	e1400	---	1720	4090	8150	5450	5240	4790	2990
31	1880	---	e1500	e1400	---	1670	---	7740	---	5310	4850	---
TOTAL	62300	50260	47260	41200	36980	46490	61130	233710	187460	159660	165590	123760
MEAN	2010	1675	1525	1329	1321	1500	2038	7539	6249	5150	5342	4125
MAX	2710	1840	1650	1500	1400	1850	4090	13200	7770	5320	5550	4960
MIN	1850	1590	1400	1100	1200	1300	1550	4280	5450	4890	4790	2990
AC-FT	123600	99690	93740	81720	73350	92210	121300	463600	371800	316700	328400	245500

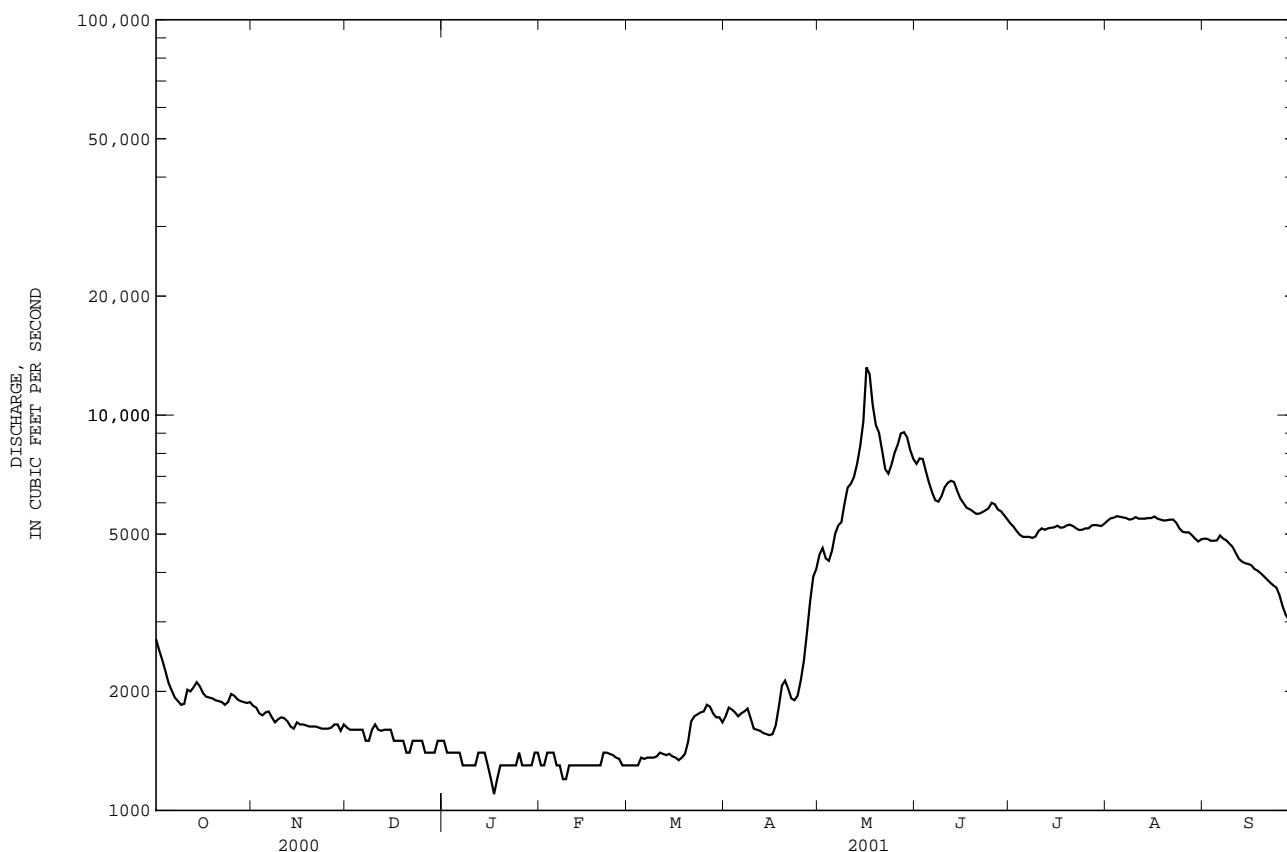
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2001, BY WATER YEAR (WY)

MEAN	2195	1863	1699	1522	1607	1849	3373	8983	13520	8554	5357	4055
MAX	3605	4244	5795	2694	3381	4116	6820	15890	28180	15790	7541	7595
(WY)	1983	1957	1957	1997	1961	1997	1985	1997	1997	1982	1956	1984
MIN	1325	1225	1101	1069	1071	1099	1506	2995	6249	3802	2494	2241
(WY)	1978	1978	1988	1964	1938	1955	1955	1977	2001	1988	1981	1977

## 13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1937 - 2001	
ANNUAL TOTAL	1353810		1215800		--	
ANNUAL MEAN	3699		3331		4573	
HIGHEST ANNUAL MEAN	--		--		7525	1997
LOWEST ANNUAL MEAN	--		--		2726	1977
HIGHEST DAILY MEAN	16500	May 30	13200	May 16	38100	Jun 11 1997
LOWEST DAILY MEAN	1400	Jan 31,	1100	Jan 17	900	Dec 31 1978
		Dec 20,21,26-29				
ANNUAL SEVEN-DAY MINIMUM	1440	Dec 23	1240	Jan 15	957	Jan 9 1964
ANNUAL RUNOFF (AC-FT)	2685000		2412000		3313000	
10 PERCENT EXCEEDS	8520		6060		10800	
50 PERCENT EXCEEDS	2160		1910		2450	
90 PERCENT EXCEEDS	1600		1300		1320	

e Estimated.



LOCATION.--Lat 43°08'34", long 110°58'36" (revised), in SW<sup>1</sup>/<sub>4</sub> SE<sup>1</sup>/<sub>4</sub> sec.34, T.37 N., R.118 W. (unsurveyed), Lincoln County, Wyoming, Hydrologic Unit 17040103, on right bank at Bridge Campground, 3.6 mi southeast of Alpine, 3.0 mi upstream from maximum flowline of Palisades Reservoir.

PERIOD OF RECORD.--July to September 1917, June to September 1918, March 1937 to March 1939, October 1953 to current year.  
Published as "Greys River near Alpine, Idaho", 1917-1918, and as "Greys River near Alpine, Wyo.", 1937-39.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Station equipment includes satellite telemetry. Less than 500 acres irrigated by diversions from Greys River and tributaries upstream from station. Station operated and record provided by the Idaho District.

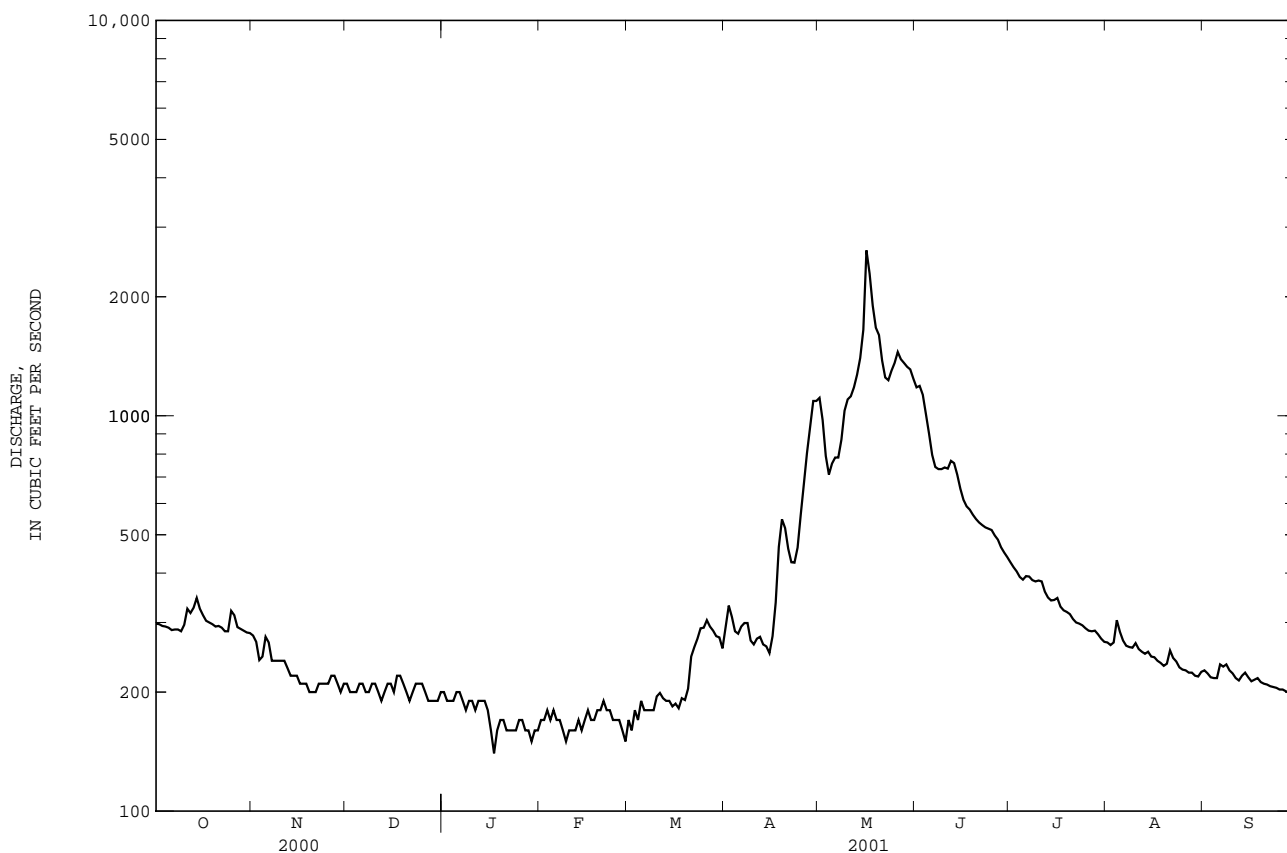
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	298	278	e210	e200	e170	e170	292	1110	1180	426	267	227
2	297	268	e200	e190	e170	e160	331	975	1190	414	263	223
3	294	241	e200	e190	e180	e180	310	791	1130	404	267	218
4	293	246	e200	e190	e170	e170	285	710	1010	391	304	217
5	291	276	e210	e200	e180	e190	281	757	901	385	284	217
6	287	267	e210	e200	e170	e180	293	784	796	393	270	235
7	288	e240	e200	e190	e170	e180	299	784	742	392	262	232
8	288	e240	e200	e180	e160	e180	299	870	733	384	260	235
9	285	e240	e210	e190	e150	e180	270	1030	733	381	259	227
10	296	e240	e210	e190	e160	195	264	1100	740	383	266	223
11	325	e240	e200	e180	e160	199	273	1120	735	381	257	217
12	317	e230	e190	e190	e160	193	276	1180	769	359	253	214
13	327	e220	e200	e190	e170	190	264	1270	759	347	250	220
14	346	e220	e210	e190	e160	190	261	1400	710	341	253	224
15	325	e220	e210	e180	e170	184	251	1650	654	342	246	218
16	313	e210	e200	e160	e180	187	277	2620	613	346	245	213
17	303	e210	e220	e140	e170	182	337	2290	590	329	240	215
18	300	e210	e220	e160	e170	193	466	1900	579	322	237	217
19	297	e200	e210	e170	e180	191	547	1670	562	319	233	212
20	293	e200	e200	e170	e180	204	520	1600	548	315	236	210
21	294	e200	e190	e160	e190	246	461	1380	537	306	255	209
22	291	e210	e200	e160	e180	260	426	1250	529	300	244	207
23	285	e210	e210	e160	e180	273	425	1230	522	298	239	206
24	285	e210	e210	e160	e170	290	464	1300	518	295	231	205
25	321	e210	e210	e170	e170	291	562	1360	514	290	228	203
26	313	e220	e200	e170	e170	304	672	1450	498	286	227	203
27	292	e220	e190	e160	e160	293	805	1390	486	285	224	201
28	289	e210	e190	e160	e150	286	937	1360	465	286	224	199
29	286	e200	e190	e150	---	277	1090	1330	451	280	220	199
30	283	e210	e190	e160	---	275	1090	1310	439	273	219	199
31	282	---	e200	e160	---	258	---	1240	---	268	225	---
TOTAL	9284	6796	6290	5420	4750	6751	13328	40211	20633	10521	7688	6445
MEAN	299	227	203	175	170	218	444	1297	688	339	248	215
MAX	346	278	220	200	190	304	1090	2620	1190	426	304	235
MIN	282	200	190	140	150	160	251	710	439	268	219	199
AC-FT	18410	13480	12480	10750	9420	13390	26440	79760	40930	20870	15250	12780
CFSM	.67	.51	.45	.39	.38	.49	.99	2.90	1.54	.76	.55	.48
IN.	.77	.5										

MEAN	318	268	232	214	205	232	636	1785	2015	948	485	370
MAX	472	455	366	315	293	406	1324	3032	3998	1904	809	569
(WY)	1983	1984	1984	1971	1963	1986	1962	1997	1971	1975	1971	1997
MIN	191	150	142	133	132	173	238	333	387	228	205	198
(WY)	1993	1993	1993	1993	1993	1967	1975	1977	1977	1977	1977	1977

## 13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1937 - 2001	
ANNUAL TOTAL	209053		138117		--	
ANNUAL MEAN	571		378		647	
HIGHEST ANNUAL MEAN	--		--		1022	1971
LOWEST ANNUAL MEAN	--		--		259	1977
HIGHEST DAILY MEAN	2640	May 26	2620	May 16	6170	Jun 19 1971
LOWEST DAILY MEAN	160	Jan 31	140	Jan 17	92	Jan 2 1978
ANNUAL SEVEN-DAY MINIMUM	174	Jan 28	160	Jan 16	124	Feb 26 1993
ANNUAL RUNOFF (AC-FT)	414700		274000		468700	
10 PERCENT EXCEEDS	1480		793		1730	
50 PERCENT EXCEEDS	318		246		320	
90 PERCENT EXCEEDS	200		170		190	

e Estimated.



## SALT RIVER BASIN

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY

LOCATION.--Lat 43°04'47", long 111°02'14", in SW<sup>1</sup>/<sub>4</sub> NE<sup>1</sup>/<sub>4</sub> sec.28, T.36 N., R.119 W., Lincoln County, Wyoming, Hydrologic Unit 17040105, on right bank 3.4 mi northwest of Etna, and 8.0 mi upstream from maximum flowline of Palisades Reservoir.

DRAINAGE AREA.--829 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,675.78 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good. Station equipment includes satellite telemetry. Diversions above station for power developments, industry, municipal supply, and irrigation of about 60,500 acres of which about 1,000 acres are below station (1966 determination). For details on adjudication of diversions, see Remarks for this station in WSP 1347. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	448	498	430	383	321	337	591	651	404	295	287	298
2	448	491	414	375	321	339	603	630	383	291	286	302
3	450	473	409	363	334	353	562	596	394	284	293	306
4	449	476	408	368	345	345	538	568	409	282	298	315
5	448	490	420	383	361	347	529	552	414	285	296	316
6	452	493	421	365	349	342	529	538	395	292	289	323
7	455	472	398	357	354	342	524	521	369	308	283	329
8	455	470	404	350	329	342	526	521	359	322	280	334
9	455	472	423	361	300	345	506	533	345	344	277	329
10	460	468	428	377	351	347	494	538	329	346	282	331
11	493	470	424	354	355	350	480	480	321	357	281	342
12	493	468	412	369	345	348	471	441	334	346	279	356
13	493	467	417	370	340	348	465	440	378	329	287	363
14	531	450	417	371	338	349	459	442	396	324	288	370
15	522	462	419	363	335	348	449	434	381	328	286	372
16	490	459	378	347	342	352	447	601	360	340	284	359
17	473	440	419	318	335	354	451	591	353	330	281	358
18	461	433	404	345	340	358	490	570	351	331	278	372
19	467	427	370	355	338	367	539	525	343	344	275	371
20	467	413	e370	351	336	391	536	494	329	332	286	372
21	464	410	365	327	333	466	516	482	322	361	307	376
22	465	425	404	330	336	532	496	465	315	332	304	375
23	463	432	410	333	337	528	491	443	316	325	289	372
24	465	426	404	327	337	553	493	424	314	313	287	372
25	493	428	405	338	337	555	512	412	321	305	288	371
26	502	427	403	345	336	591	538	423	313	301	287	364
27	472	434	385	320	335	594	570	440	310	302	282	354
28	474	427	381	312	335	582	600	453	307	309	285	347
29	473	426	372	308	---	559	650	470	303	301	281	351
30	475	434	381	311	---	569	642	439	298	296	279	346
31	498	---	391	310	---	551	---	419	---	290	290	---
TOTAL	14654	13561	12486	10786	9455	13084	15697	15536	10466	9845	8875	10446
MEAN	473	452	403	348	338	422	523	501	349	318	286	348
MAX	531	498	430	383	361	594	650	651	414	361	307	376
MIN	448	410	365	308	300	337	447	412	298	282	275	298
AC-FT	29070	26900	24770	21390	18750	25950	31140	30820	20760	19530	17600	20720

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2001, BY WATER YEAR (WY)

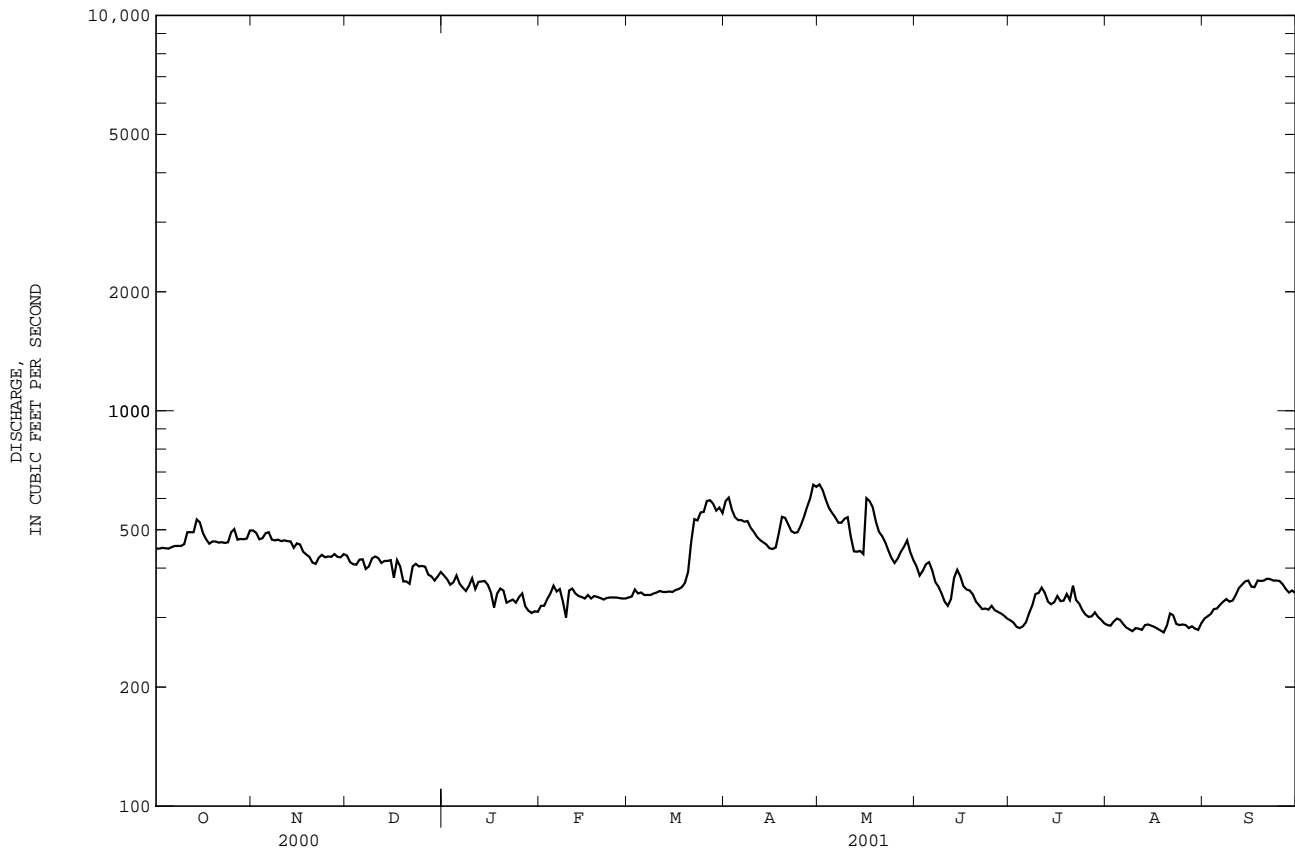
	MEAN	620	588	515	449	438	478	960	1726	1487	855	624	638
MAX	912	838	712	584	702	1121	2204	3586	3486	1809	997	961	
(WY)	1983	1984	1984	1997	1963	1986	1986	1997	1997	1975	1983	1971	
MIN	336	347	342	318	309	362	503	306	275	271	266	342	
(WY)	1978	1978	1993	1993	1993	1988	1977	1977	1977	1977	1977	1977	



## 13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1954 - 2001	
ANNUAL TOTAL	216592		144891		--	
ANNUAL MEAN	592		397		782	
HIGHEST ANNUAL MEAN	--		--		1272	1997
LOWEST ANNUAL MEAN	--		--		397	2001
HIGHEST DAILY MEAN	1520	May 27	651	May 1	5030	Jun 2 1986
LOWEST DAILY MEAN	365	Dec 21	275	Aug 19	180	Jan 7 1971
ANNUAL SEVEN-DAY MINIMUM	387	Dec 16	281	Aug 7	226	May 10 1977
ANNUAL RUNOFF (AC-FT)	429600		287400		566900	
10 PERCENT EXCEEDS	1180		525		1530	
50 PERCENT EXCEEDS	454		371		578	
90 PERCENT EXCEEDS	407		297		381	

e Estimated.



## SALT RIVER BASIN

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 31...	0955	504	618	9.6	98	8.0	472	5.5	7.0	<.041	.987	E.004	<.018
FEB 21...	1015	331	624	10.3	91	8.1	486	3.0	2.0	<.041	1.01	.008	<.018
APR 19...	1545	557	630	10.1	105	8.2	483	13.0	8.5	<.041	.639	E.003	<.018
JUN 27...	1100	306	625	10.0	114	8.2	471	22.0	12.0	E.022	.800	.007	<.020
AUG 07...	0925	265	630	7.5	85	8.1	477	23.0	12.0	E.021	.934	.008	<.020

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 31...	--	E11k	35	48
FEB 21...	E11k	E12k	38	34
APR 19...	45	82	77	116
JUN 27...	E17k	21	21	17
AUG 07...	58	59	34	24

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## 13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY

LOCATION.--Lat 44°11'07", long 111°00'28"(revised), T.49 N., R.118 W., Teton County, Yellowstone National Park, Hydrologic Unit 17040203, on right bank 0.4 mi upstream from confluence with the Bechler River, 3.8 mi north of the Bechler Ranger Station, and 28.0 mi northeast of Ashton, Idaho.

DRAINAGE AREA.--86.9 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,360 ft above sea level, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No diversion or regulation. Station operated and record provided by the Idaho District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	79	74	70	67	65	73	207	101	75	66	62
2	81	78	74	69	68	65	76	162	100	73	65	61
3	79	77	73	69	68	65	74	147	101	73	66	61
4	78	76	73	69	67	64	73	144	113	73	67	61
5	78	78	73	69	68	64	73	143	115	73	66	62
6	78	77	73	69	68	65	76	138	107	73	65	62
7	77	76	73	69	67	66	79	129	102	73	65	63
8	77	76	73	69	66	66	81	127	95	72	65	63
9	77	77	74	69	66	66	77	133	90	74	64	62
10	78	76	75	70	66	66	76	132	87	81	64	62
11	86	76	73	69	66	66	76	129	84	74	64	61
12	85	76	73	70	66	65	77	144	96	72	64	61
13	90	75	74	69	66	64	77	162	104	72	64	63
14	85	75	76	69	65	65	77	167	110	72	65	63
15	84	76	76	69	65	64	74	195	121	75	65	63
16	84	76	72	69	66	64	76	237	108	73	63	62
17	83	76	73	68	65	64	81	240	97	72	63	63
18	83	75	72	68	65	65	94	211	91	71	62	62
19	83	76	72	68	65	65	108	187	87	70	62	62
20	82	75	71	69	67	70	103	186	84	70	62	61
21	91	75	71	68	67	70	99	168	83	69	62	61
22	87	75	72	68	68	71	102	158	81	68	62	61
23	84	74	72	68	66	71	112	161	80	68	62	61
24	83	74	73	68	67	72	124	163	79	67	62	61
25	85	74	71	68	66	74	146	154	78	67	61	60
26	84	75	70	68	66	75	177	141	78	67	61	60
27	82	76	70	67	65	72	215	132	77	66	61	60
28	82	75	70	67	65	72	250	139	76	66	61	60
29	81	74	70	67	---	71	293	126	76	66	61	60
30	81	76	70	66	---	71	259	113	75	66	61	60
31	79	---	70	67	---	70	---	105	---	66	62	---
TOTAL	2549	2274	2246	2122	1857	2093	3378	4880	2776	2197	1963	1844
MEAN	82.2	75.8	72.5	68.5	66.3	67.5	113	157	92.5	70.9	63.3	61.5
MAX	91	79	76	70	68	75	293	240	121	81	67	63
MIN	77	74	70	66	65	64	73	105	75	66	61	60
AC-FT	5060	4510	4450	4210	3680	4150	6700	9680	5510	4360	3890	3660

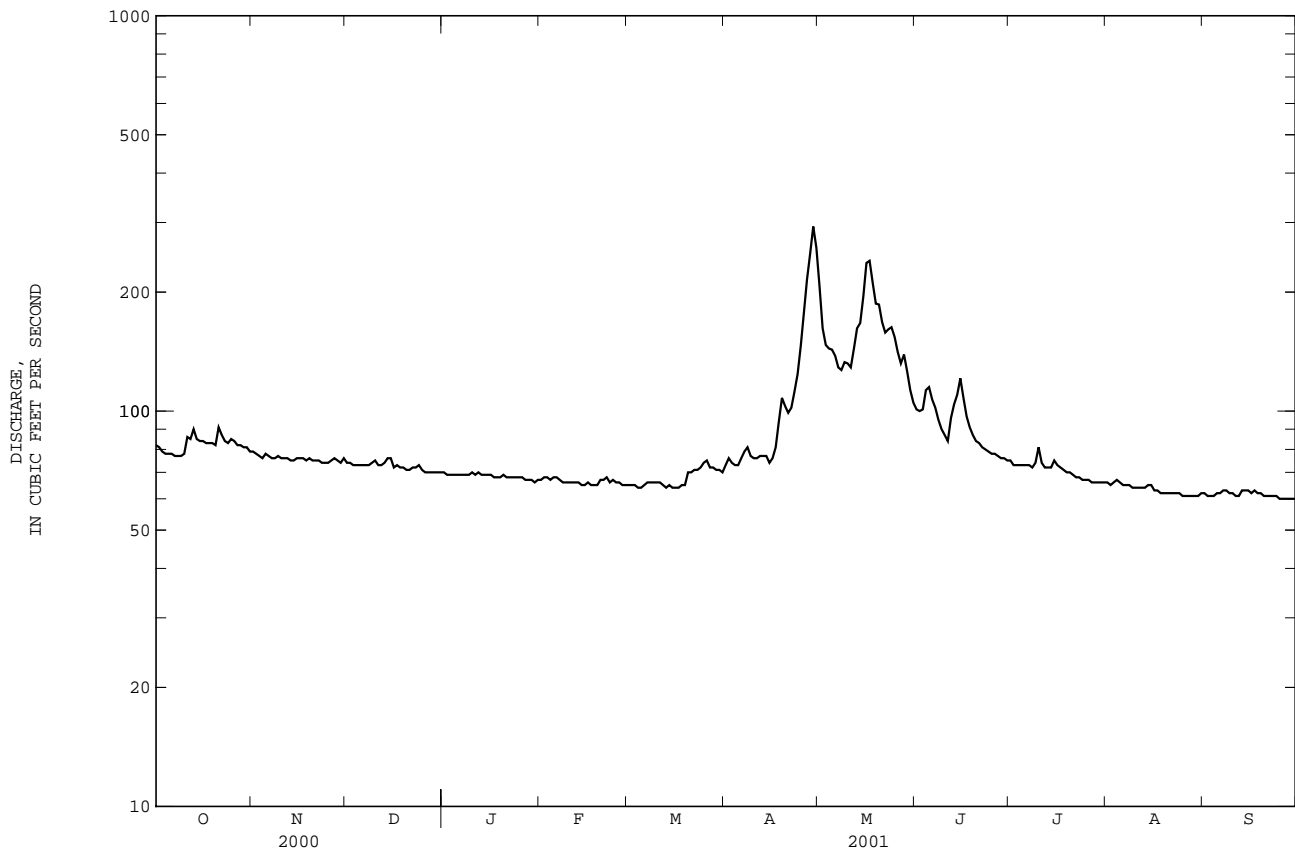
## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

	MEAN	82.6	82.1	78.3	74.0	70.3	71.6	125	276	234	105	85.2	81.7
MAX	120	108	101	100	88.5	91.3	215	460	566	179	139	129	
(WY)	1998	1998	1996	1997	1998	1997	1990	1997	1986	1997	1997	1997	
MIN	61.6	61.9	58.8	58.1	53.8	58.0	68.8	150	83.3	68.1	62.2	59.4	
(WY)	1993	1993	1993	1993	1989	1993	1991	1990	1987	1988	1988	1988	

## HENRYS FORK BASIN

13046680 BOUNDARY CREEK NEAR BECHLER RANGER STATION, WY--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1984 - 2001	
ANNUAL TOTAL	39264		30179		--	
ANNUAL MEAN	107		82.7		114	
HIGHEST ANNUAL MEAN	--		--		169	1997
LOWEST ANNUAL MEAN	--		--		82.7	2001
HIGHEST DAILY MEAN	317	Apr 28	293	Apr 29	810	Jun 2 1986
LOWEST DAILY MEAN	70	Dec 26-31	60	Sep 25	53	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	70	Dec 25	60	Sep 24	53	Feb 12 1989
ANNUAL RUNOFF (AC-FT)	77880		59860		82560	
10 PERCENT EXCEEDS	222		122		225	
50 PERCENT EXCEEDS	81		73		83	
90 PERCENT EXCEEDS	75		62		62	



Annual maximum discharge at miscellaneous sites during water year 2001

Stream	Tributary to	Location	Period of Record	Measurements		
				Date	Gage height (feet)	Discharge (cfs)
Platte River Basin						
Crow Creek at 5th Street, in Cheyenne	South Platte River	Lat 41°07'20", long 104°48'38", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from bridge on 5th Street, in Cheyenne.	1995-01	7-13-01	7.35	379
Crow Creek on C.P. Organ property, in Cheyenne	South Platte River	Lat 41°07'26", long 104°47'20", in NW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.4, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 100 ft downstream from bridge over Crow Creek on private land, and approximately 1,700 ft east of Morrie Avenue, in Cheyenne.	1996-01	7-13-01	4.45	389
Clear Creek at Parsley Boulevard, in Cheyenne	Crow Creek	Lat 41°07'30", long 104°49'22", in SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.6, T.13 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from culvert under Parsley Boulevard, in Cheyenne.	1996-01	7-13-01	7.81	15.2
Henderson Drain at Nationway in Cheyenne	Crow Creek	Lat 41°08'08", long 104°46'19", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.33, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 40 ft upstream from culvert on Nationway, in Cheyenne.	1994, 1996-01	7-13-01	9.52	223
Dry Creek at Vista Lane, in Cheyenne 06756030	Crow Creek	Lat 41°10'27", long 104°50'31", in NW <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.24, T.14 N., R.67 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Vista Lane, in Cheyenne.	1987-01	7-13-01	3.91	55.5
Dry Creek at Smalley Park, in Cheyenne	Crow Creek	Lat 41°10'02", long 104°49'07", in NE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec. 19, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Seminole Road in Cheyenne.	1994-01	7-13-01	15.32	428
Dry Creek tributary at Briarwood Road, in Cheyenne	Dry Creek	Lat 41°09'53", long 104°47'15", in SE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.21, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 15 ft upstream from culvert on Briarwood Road, in Cheyenne.	1994, 1996-01	7-13-01	12.44	4.65
Dry Creek at Windmill Road,in Cheyenne	Crow Creek	Lat 41°09'39", long 104°46'45", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> sec.21, T.14 N., R.66 W., Laramie County, Hydrologic Unit 1019000, 50 ft upstream from culvert on Windmill Road in Cheyenne.	1994-01	7-13-01	10.41	420
Dry Creek at College Drive, in Cheyenne	Crow Creek	Lat 41°09'26", long 104°45'38", in SE <sup>1</sup> / <sub>4</sub> NE <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.27, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 40 ft upstream from culvert on College Drive, in Cheyenne.	1994-01	7-13-01	12.92	472
Dry Creek at Rawlins Street,in Cheyenne	Crow Creek	Lat 41°09'11", long 104°45'03", in SW <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> NW <sup>1</sup> / <sub>4</sub> sec.26, T.14 N., R.66 W., Laramie County, Hydrologic Unit 10190009, 30 ft upstream from culvert on Rawlins Street, in Cheyenne.	1994-01	7-13-01	16.70	355



## DISCHARGE AT MISCELLANEOUS SITES

471

Discharge measurements made at miscellaneous sites during water year 2001

Stream	Tributary to	Location	Drainage area (sq mi)	Measured pre- viously (water years)	Measurements	
					Date	Discharge (cfs)
Fish Creek above Mosquito Creek, near Wilson 432705110514501	Snake River	Lat 43°27'05", long 110°51'45", in SE <sup>1</sup> / <sub>4</sub> SE <sup>1</sup> / <sub>4</sub> SW <sup>1</sup> / <sub>4</sub> sec.3, T.40 N., R.117 W., Teton County, Hydrologic Unit 17040103, at bridge on Fish Creek Meadow Road and 3.5 mi south of Wilson on Fall Creek Road.	2000		10-11-00	128
					04-03-01	71.9
					05-22-01	328
					06-28-01	391
					08-09-01	337
					09-18-01	267

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## BURGER DRAW COAL BED METHANE WATER SAMPLE

## YELLOWSTONE RIVER BASIN

440849106083101 BURGER DRAW AT MOUTH, NEAR BUFFALO, WY (LAT 44 08 49 LONG 106 08 31)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)	
SEP 11...	1655	.31	8.7	4170	24.5	21.5	200	25.4	34.1	45.0	32	1040	2470	
DATE		CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)
SEP 11...	31.1	1.4	9.4	80.3	3.78	2.32	2780	2740	8	.29	3.7	599	934	
DATE		BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)
SEP 11...	<.10	186	<.07	<.8	.85	4.0	70	.16	397	4.8	2.5	1.87	.8	
DATE					SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)				
SEP 11...					<2.0	414	<.08	6.2	<2	4.84				



## FREMONT COUNTY WEED AND PEST DISTRICT STUDY

## YELLOWSTONE RIVER BASIN

425008108445401 SQUAW CREEK AT SMITH STREET, AT LANDER, WY (LAT 42 50 08 LONG 108 44 54)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	2,4-DP TOTAL (UG/L) (82183)	2,4,5-T TOTAL (UG/L) (39740)	2,4-D, TOTAL (UG/L) (39730)	DICAMBA TOTAL (UG/L) (82052)	PIC- LORAM UNFILT RECOVER (UG/L) (39720)	SILVEX, TOTAL (UG/L) (39760)
AUG 13...	1125	1.4	1170	26.0	16.0	<.03	<.01	.07	E.01	.12	<.02

E -- Estimated value.

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## KENDRICK IRRIGATION STUDY

## PLATTE RIVER BASIN

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

425841106304702 -- SOUTH FORK CASPER CREEK AT INLET TO 33 MI RESERVOIR, NEAR ILLCO, WY  
(LAT 42 58 18 LONG 106 29 34)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	0915	1.1	638	9.9	7.9	4050	19.0	14.0	60.3
AUG 29...	0800	1.6	628	4.9	7.9	4440	15.5	14.0	58.1

425818106302701 -- THIRTYTHREE MILE RESERVOIR NEAR OUTLET, NR ILLCO, WY  
(LAT 42 58 18 LONG 106 30 27)

DATE	TIME	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1015	638	10.7	8.6	2780	22.0	21.0	23.2
AUG 29...	0910	630	7.5	8.4	2920	18.5	17.0	22.9

425818106293401 -- SOUTH FORK CASPER CREEK BELOW 33 MILE RESERVOIR, NEAR CASPER, WY  
(LAT 42 58 18 LONG 106 29 34)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1100	2.4	639	10.9	8.3	3140	22.0	19.0	21.6
AUG 29...	0950	4.0	630	7.6	8.0	1710	20.0	16.0	7.1

430020106300801 -- SOUTHWEST INLET TRIBUTARY TO ILLCO SEEP, NEAR ILLCO, WY  
(LAT 43 00 20 LONG 106 30 08)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE AIR (DEG C) (00020)
JUN 21...	1430	.00	26.5
AUG 29...	1210	.00	24.0

430014106300301 -- MIDDLE TRIBUTARY ON SOUTH SIDE ILLCO SEEP AT ILLCO, WY  
(LAT 43 00 14 LONG 106 30 03)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TEMPER- ATURE AIR (DEG C) (00020)
JUN 21...	1440	.00	26.5
AUG 29...	1215	.00	24.0

## KENDRICK IRRIGATION STUDY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

430012106295901 -- IR-51 NEAR CASPER, WY  
(LAT 43 00 12 LONG 106 29 59)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1450	.13	636	7.3	8.1	3000	26.0	20.0	24.8
AUG 29...	1220	.23	630	8.0	8.2	1860	26.0	14.5	5.5

430018106300201 -- ILLCO SEEP NEAR OUTLET, NEAR ILLCO, WY  
(LAT 43 00 18 LONG 106 30 02)

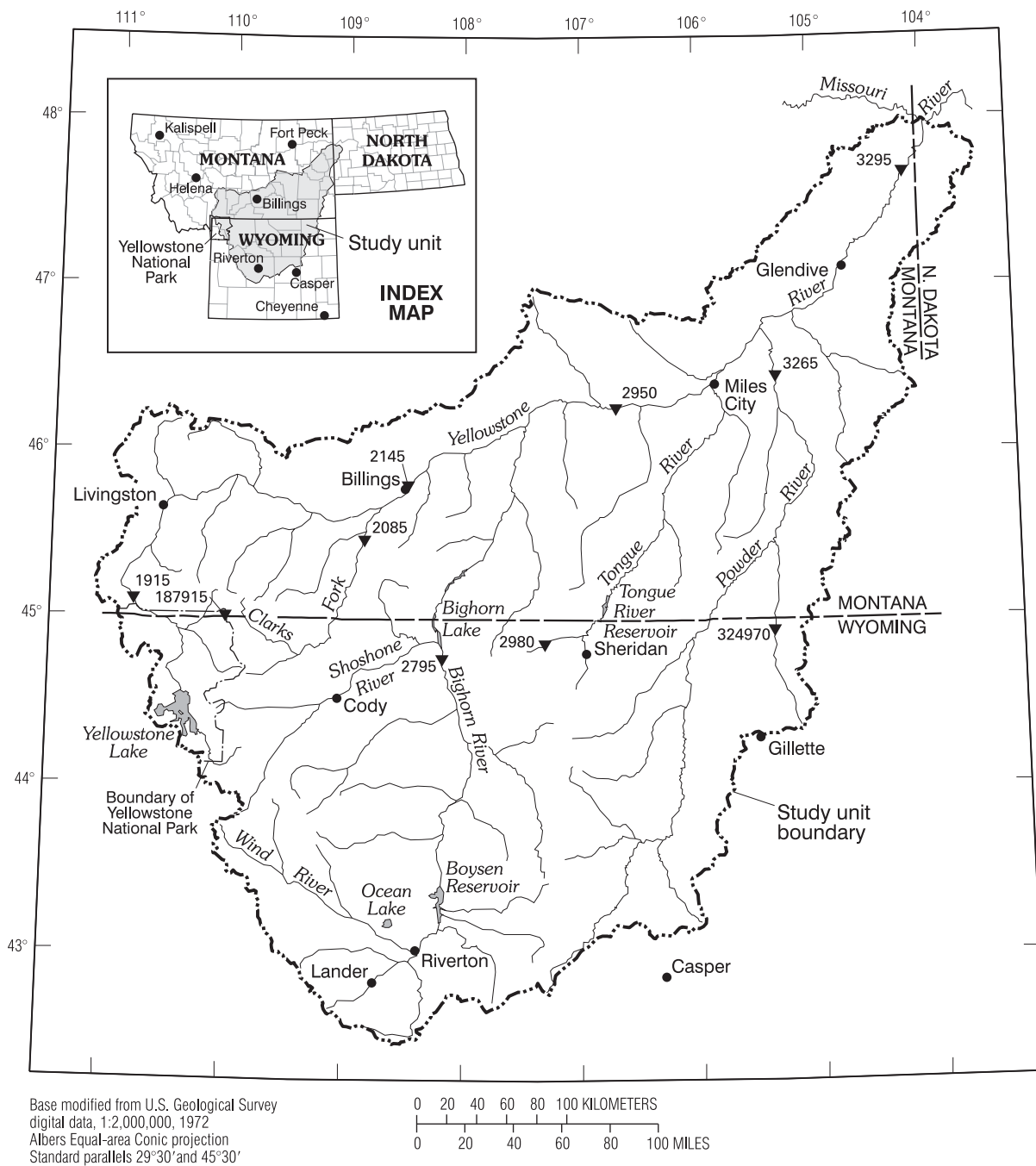
DATE	TIME	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1400	636	19.8	8.6	1540	26.5	25.0	4.0
AUG 29...	1200	630	4.2	8.2	1320	24.0	22.0	.5

430016106295901 -- UNNAMED POND ON E SIDE OF ILLCO SEEP, NR ILLCO, WY  
(LAT 43 00 16 LONG 106 29 59)

DATE	TIME	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1500	636	9.9	8.3	1540	26.5	23.0	7.0
AUG 29...	1235	630	6.4	8.2	1750	26.0	20.0	4.5

430013106292001 -- OUTLET TRIB OF ILLCO SEEP AT CULVERT, AT ILLCO, WY  
(LAT 43 00 13 LONG 106 29 20)

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
JUN 21...	1200	.41	638	8.3	7.9	2000	24.0	19.0	1.6
AUG 29...	1310	.16	630	6.9	7.9	2000	26.0	19.0	1.3



**Figure 5.** Location of surface-water sampling sites in the Yellowstone River Basin NAWQA study unit, Montana, North Dakota, and Wyoming.

## YELLOWSTONE RIVER BASIN

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT  
(National Water-Quality Assessment Program)

LOCATION.--Lat 45°00'11", long 110°00'04", in SW 1/4 NW 1/4 SW 1/4 sec.33, T.9 S., R.14 E., Park County, Hydrologic Unit 10070001, at Yellowstone National park boundary, 0.25 mi downstream from Silver Creek, 0.75 mi southwest of Silver Gate, and at river mile 17.8.

DRAINAGE AREA.--31.2 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 7,340 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. No known regulation or diversion upstream of station.

COOPERATION.--Records collected by the National Park Service and U.S. Department of Agriculture, Forest Service, under the general supervision of the Geological Survey. Record provided by the Montana District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	8.2	e3.5	e2.7	e2.5	e1.1	2.0	33	266	118	28	9.1
2	20	8.0	e3.5	e2.6	e2.5	e1.1	1.9	24	264	109	26	8.4
3	15	e7.5	e3.5	e2.5	e2.5	e1.1	1.8	22	218	102	24	8.1
4	12	e7.0	e3.5	e2.3	e2.5	e1.1	1.8	28	170	91	23	8.0
5	11	e7.5	e3.5	e2.0	e2.5	e1.1	1.7	37	147	87	22	8.2
6	9.5	e7.5	e3.5	e2.0	e2.5	e1.1	1.7	37	139	83	21	11
7	9.4	e7.0	e3.5	e2.0	e2.5	e1.2	1.8	39	130	77	20	12
8	8.8	e6.5	e3.5	e2.0	e2.4	e1.2	1.8	58	148	71	19	12
9	8.5	e6.0	e3.5	e2.1	e2.0	e1.2	1.7	71	186	68	19	11
10	8.4	e5.0	e3.0	e2.2	e2.0	e1.2	1.7	67	200	83	18	9.5
11	8.9	e5.0	e2.5	e2.2	e2.0	e1.1	1.6	82	177	74	17	8.9
12	8.6	e5.0	e2.8	e2.2	e2.0	e1.1	1.6	126	219	66	16	8.7
13	8.9	e4.5	e2.8	e2.2	e2.0	e1.1	1.5	182	168	59	16	8.9
14	9.0	e4.5	e2.8	e2.2	e2.0	e1.1	1.5	248	153	71	15	9.6
15	9.0	e4.5	e2.8	e2.2	e2.0	e1.1	1.5	307	161	89	16	9.4
16	9.2	e4.5	e2.8	e2.2	e1.9	e1.2	1.6	236	174	69	17	9.0
17	10	e4.0	e2.7	e2.0	e1.9	e1.3	3.1	206	179	58	15	8.6
18	10	e4.0	e2.6	e2.0	e1.9	e1.4	6.1	189	183	54	13	8.5
19	10	e4.0	e2.5	e2.0	e1.9	e1.4	6.6	197	164	50	12	8.6
20	9.6	e3.5	e2.0	e2.0	e1.9	e1.4	4.1	188	166	47	12	8.0
21	9.6	e3.5	e2.5	e2.0	e1.8	e1.4	3.5	147	182	44	12	7.5
22	9.0	e3.5	e2.5	e2.0	e1.8	e1.4	3.5	156	205	41	12	7.2
23	8.4	e3.5	e2.5	e2.0	e1.5	e1.5	3.8	202	202	39	11	6.9
24	8.8	e3.5	e2.5	e2.0	e1.5	e1.7	4.6	249	200	38	10	6.6
25	10	e3.5	e2.5	e2.0	e1.3	e1.8	9.3	276	177	36	10	6.5
26	9.6	e3.5	e2.5	e2.0	e1.2	e2.0	17	318	158	34	9.6	6.2
27	9.3	e3.5	e2.5	e2.0	e1.1	e2.1	21	289	153	32	9.7	6.0
28	9.3	e3.5	e2.5	e2.0	e1.0	2.2	24	302	143	31	9.9	5.6
29	9.1	e3.5	e2.5	e2.0	---	2.0	41	346	133	30	9.7	5.1
30	9.0	e3.5	e2.5	e2.2	---	2.1	35	269	123	28	9.6	5.1
31	8.7	---	e2.5	e2.5	---	1.8	---	251	---	32	9.4	---
TOTAL	339.6	148.7	88.3	66.3	54.6	43.6	209.8	5182	5288	1911	481.9	248.2
MEAN	11.0	4.96	2.85	2.14	1.95	1.41	6.99	167	176	61.6	15.5	8.27
MAX	43	8.2	3.5	2.7	2.5	2.2	41	346	266	118	28	12
MIN	8.4	3.5	2.0	2.0	1.0	1.1	1.5	22	123	28	9.4	5.1
AC-FT	674	295	175	132	108	86	416	10280	10490	3790	956	492

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

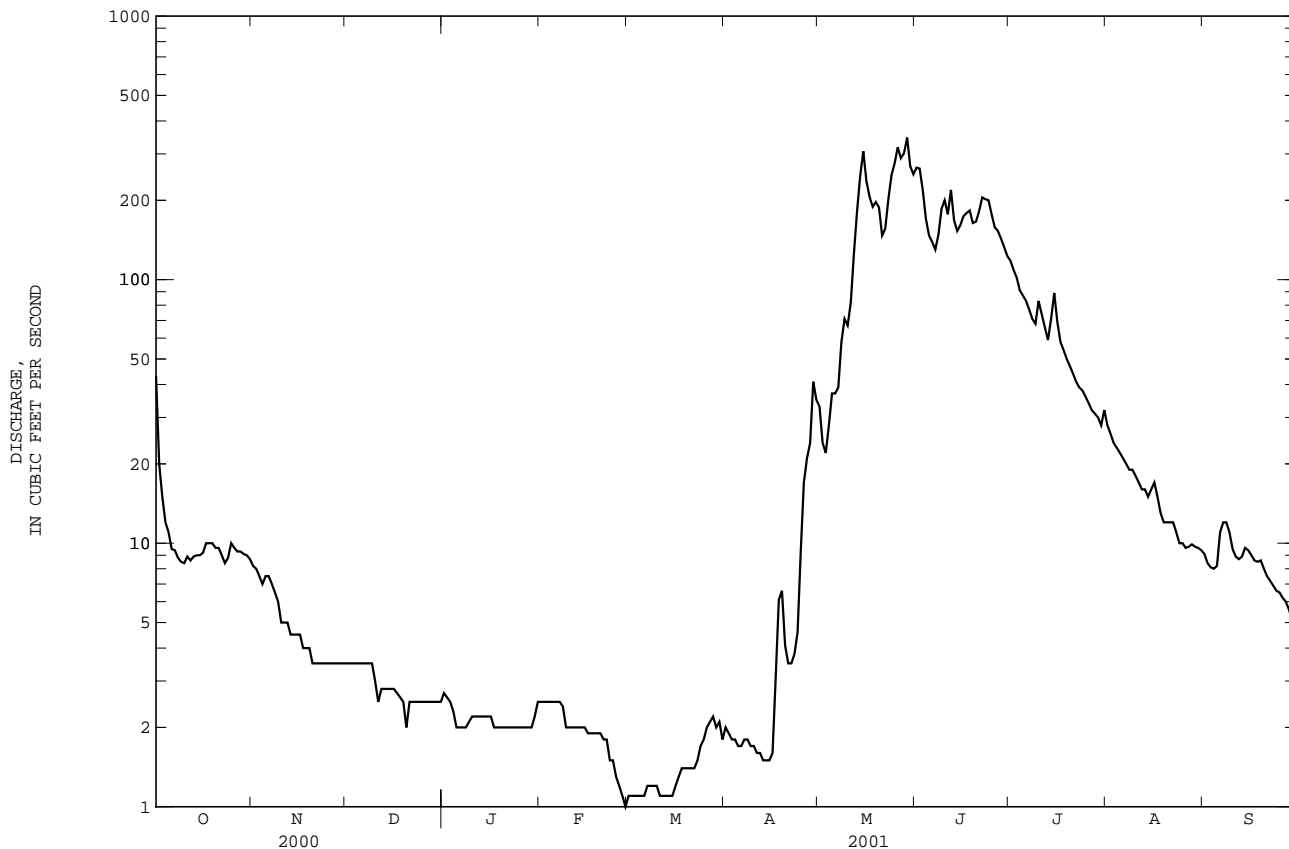
MEAN	10.4	5.75	3.20	2.09	1.94	1.68	8.49	141	284	130	28.9	13.9
MAX	11.9	6.84	3.49	2.14	2.00	1.90	14.3	167	345	212	45.0	22.4
(WY)	1999	1999	2000	2001	2000	2000	2000	2001	1999	1999	1999	1999
MIN	8.21	4.96	2.85	2.01	1.86	1.41	4.23	95.9	176	61.6	15.5	8.27
(WY)	2000	2001	2001	2000	1999	2001	1999	1999	2001	2001	2001	2001

## YELLOWSTONE RIVER BASIN

06187915 SODA BUTTE CREEK AT PARK BOUNDARY, AT SILVER GATE, MT--Continued  
(National Water-Quality Assessment Program)

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1999 - 2001	
ANNUAL TOTAL	20827.0		14062.0		--	
ANNUAL MEAN	56.9		38.5		52.7	
HIGHEST ANNUAL MEAN	--		--		62.9	
LOWEST ANNUAL MEAN	--		--		38.5	
HIGHEST DAILY MEAN	610	Jun 7	346	May 29	610	Jun 7 2000
LOWEST DAILY MEAN	1.4	Mar 17-19	1.0	Feb 28	1.0	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	1.5	Mar 17	1.1	Feb 27	1.1	Feb 27 2001
MAXIMUM PEAK FLOW	--		455		846	
MAXIMUM PEAK STAGE	--		--		3.41	
ANNUAL RUNOFF (AC-FT)	41310		27890		38200	
10 PERCENT EXCEEDS	238		162		203	
50 PERCENT EXCEEDS	8.9		7.5		8.2	
90 PERCENT EXCEEDS	2.0		1.7		1.8	

e Estimated.



## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA) (00916)	
OCT 23...	1300	8.1	4.0	659	12.1	100	8.5	199	10.0	1.5	93	27.1	25.8	
NOV 29...	0830	8.0	--	582	--	--	8.0	212	-11.0	.00	110	32.5	32.5	
DEC 18...	1530	5.4	.5	587	12.1	108	7.9	228	-8.0	.00	110	33.0	32.3	
JAN 11...	1400	4.2	.5	575	11.7	106	8.5	245	-1.0	.00	110	32.1	33.0	
FEB 20...	1400	2.3	1.5	577	12.1	111	8.5	239	2.0	.5	110	33.8	32.4	
MAR 14...	1230	1.4	.6	575	12.3	114	8.4	236	-2.0	.5	110	33.9	32.4	
MAY 25...	0800	241	11	584	11.1	106	8.6	88	19.0	2.5	37	10.7	11.1	
JUN 04...	1400	169	5.4	575	10.4	108	8.3	89	7.0	5.0	47	13.7	13.8	
JUL 19...	1000	51	5.3	578	9.3	110	8.8	158	17.5	10.6	70	20.1	19.8	
AUG 09...	0900	19	3.8	587	8.8	97	7.5	193	14.0	8.0	86	24.8	24.9	
SEP 24...	1700	6.3	--	585	9.2	111	8.4	205	27.0	12.0	96	27.6	27.9	
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG) (00927)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K) (00937)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA) (00929)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)
OCT 23...	6.22	6.69	.47	.2	.2	4.8	4.0	95	116	--	.5	<.2	10.4	
NOV 29...	7.23	7.38	.49	.3	.2	4.2	4.0	--	--	--	.4	E.1	10.2	
DEC 18...	7.27	7.22	.38	.4	.2	3.7	3.6	110	134	--	.5	E.1	10.1	
JAN 11...	7.07	7.35	.51	.5	.2	3.8	3.9	116	141	--	.6	<.2	9.9	
FEB 20...	7.32	7.27	.45	.5	.2	4.2	4.2	115	140	--	.6	<.2	10.5	
MAR 14...	7.28	7.11	.49	.6	.2	4.4	4.4	115	140	--	.6	E.1	10.5	
MAY 25...	2.48	3.32	.28	.5	.2	3.2	3.1	41	50	--	.2	E.1	9.3	
JUN 04...	3.11	3.61	.29	.3	.2	3.4	3.4	50	62	--	.2	<.2	10.8	
JUL 19...	4.86	5.46	.40	.4	.2	4.4	4.7	72	85	1	.2	<.2	11.1	
AUG 09...	5.89	6.19	.42	.5	.2	4.0	4.4	92	113	--	.8	E.1	10.4	
SEP 24...	6.51	6.71	.50	.6	.2	4.1	4.3	--	--	--	1.0	<.2	10.3	

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)

DATE	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULATE WAT FLT SUSP (MG/L AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)
OCT 23...	9.5	.16	2.54	116	116	<.041	<.10	.17	E.042	<.006	--	.028	.024
NOV 29...	10	.19	2.98	138	135	<.041	<.10	E.07	.134	<.006	--	.022	.023
DEC 18...	9.7	.18	1.97	135	131	<.041	.12	<.08	.150	<.006	--	.022	.019
JAN 11...	10.0	.18	1.52	134	134	<.041	<.10	E.05	.135	<.006	<.022	.025	.023
FEB 20...	10.6	.19	.88	143	137	<.041	<.10	<.08	.114	.007	<.022	.024	.023
MAR 14...	9.7	.18	.51	135	136	<.041	<.10	E.05	.071	<.006	<.022	.021	.021
MAY 25...	3.5	.07	35.8	55	55	<.040	E.07	.08	.061	<.006	.022	.035	.025
JUN 04...	4.9	.10	34.2	75	67	<.040	<.10	E.07	E.040	<.006	.026	.036	.026
JUL 19...	6.9	.13	12.8	93	91	<.040	<.10	E.06	E.034	E.004	<.022	.034	.025
AUG 09...	8.9	.15	5.69	111	111	.050	<.10	.09	.047	<.006	E.006	.021	E.016
SEP 24...	8.6	.17	2.11	124	122	<.040	E.08	.10	E.027	<.006	<.022	.022	.021
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)
OCT 23...	.042	--	1.00	.4	E5k	E4k	2	252	.06	.7	<2	16.2	16.4
NOV 29...	.026	--	.72	.3	E4k	E8k	2	49	.05	.6	<2	18.8	19.0
DEC 18...	.023	--	.48	<.2	E5k	E2k	--	E25	--	--	<3	--	17.7
JAN 11...	.024	<.1	.57	--	E4k	E4k	2	E20	E.03	.6	<2	18.5	17.7
FEB 20...	.032	.2	.65	--	E1k	E1k	1	96	E.04	.6	<2	17.0	18.1
MAR 14...	.027	<.1	.70	--	25	25	1	<28	.07	.7	<2	17.4	15.7
MAY 25...	.074	.5	1.8	--	E3k	E4k	10	943	E.03	.4	<2	7.8	19.1
JUN 04...	.060	.2	1.6	--	E2k	<1	7	268	.05	.5	<2	10	12.4
JUL 19...	.049	.2	1.3	--	E30k	E26k	3	480	E.04	.5	<2	14.2	17.0
AUG 09...	.028	.3	.87	--	E15k	E14k	5	114	.07	.5	<2	17.5	18.8
SEP 24...	.026	.2	.92	--	E3k	E4k	2	74	.05	.6	<2	16.8	18.3



## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE) (01012)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM, DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO) (01037)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
OCT 23...	<.06	<2.50	7	<.04	<.11	<.8	<1	.08	<2	.7	<20.0	<10	580
NOV 29...	<.06	<2.50	E7	E.02	<.11	<.8	M	.07	<2	.6	<20.0	<10	110
DEC 18...	--	<2.50	--	--	<.11	--	<1	--	<2	--	<20.0	<10	60
JAN 11...	<.06	<2.50	7	<.04	<.11	<.8	<1	.07	<2	.6	<20.0	<10	40
FEB 20...	<.06	<2.50	9	<.04	<.11	<.8	<1	.06	<2	.6	<20.0	<10	130
MAR 14...	<.06	<2.50	15	<.04	<.11	<.8	<1	.07	<2	.7	<20.0	<10	<10
MAY 25...	<.06	<2.50	7	<.04	<.10	E.4	M	.04	E1	1.5	<20.0	30	1160
JUN 04...	<.06	<2.50	E6	<.04	<.10	<.8	<1	.04	<2	1.2	<20.0	10	520
JUL 19...	<.06	<2.50	7	<.04	<.10	<.8	<1	.04	<2	.7	E10.6	<10	850
AUG 09...	<.06	<2.50	18	<.04	<.10	<.8	<1	.04	<2	.8	<20.0	<10	250
SEP 24...	<.06	<2.50	25	E.02	<.10	E.4	<1	.05	<2	.9	<20.0	<10	170
DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI) (01132)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)
OCT 23...	<.08	<1	.9	<7.0	2.8	7	<.23	<.14	1.1	<1.5	.35	3	E.3
NOV 29...	<.08	<1	.9	<7.0	2.3	4	<.23	<.14	1.2	2.2	.39	<2	<.3
DEC 18...	--	<1	--	<7.0	E1.8	E2	<.23	<.14	--	E1.0	--	<2	--
JAN 11...	<.08	<1	1.0	<7.0	1.4	E2	<.23	<.14	1.2	1.6	.43	<2	<.3
FEB 20...	<.08	<1	1.0	<7.0	.9	5	<.23	<.14	1.1	E1.1	.22	<2	<.3
MAR 14...	<.08	<1	1.0	<7.0	.8	<3	<.23	<.14	1.0	<1.5	.10	<2	<.3
MAY 25...	<.08	M	.5	<7.0	1.6	41	<.01	<.01	.3	<1.5	.30	2	<.3
JUN 04...	<.08	<1	.5	<7.0	1.7	12	<.01	<.01	.4	<1.5	.19	E1	<.3
JUL 19...	<.08	<1	.6	<7.0	2.2	12	<.01	<.01	.7	<1.5	<.06	E1	<.3
AUG 09...	E.07	<1	.8	<7.0	2.7	4	<.01	<.01	1.0	<1.5	<.06	<2	E.3
SEP 24...	E.07	<1	.9	<7.0	1.8	3	<.01	<.01	1.1	2.5	<.06	E2	<.3

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06187915 SODA BUTTE CREEK AT YNP BOUNDARY, NEAR SILVER GATE, MT (LAT 45 00 10 LONG 110 00 04)

DATE	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR) (01082)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)
OCT 23...	<2.6	<1.0	<.43	106	99.0	<.04	2.5	<1	<31	.18	3	.07
NOV 29...	<2.6	<1.0	<.43	130	127	<.04	1.9	1	<31	.22	2	.04
DEC 18...	<2.6	--	<.43	--	125	--	--	--	<31	--	1	.01
JAN 11...	<2.6	<1.0	<.43	134	127	<.04	3.5	<1	<31	.24	1	.01
FEB 20...	<2.6	<1.0	<.43	138	127	<.04	3.3	1	<31	.24	5	.03
MAR 14...	<2.6	<1.0	<.43	142	128	<.04	2.7	1	<31	.21	2	.01
MAY 25...	<3.0	<1.0	<.40	41.4	46.7	<.04	2.3	1	<31	.04	41	27
JUN 04...	<3.0	<1.0	<.40	52.5	50.1	<.04	2.7	2	<31	.07	15	6.8
JUL 19...	<3.0	<1.0	<.40	78.0	72.9	<.04	3.1	<1	<31	.13	14	1.9
AUG 09...	<3.0	<1.0	<.40	98.9	99.4	<.04	2.3	4	<31	.17	5	.26
SEP 24...	<3.0	<1.0	<.40	107	112	<.04	2.5	6	<31	.19	2	.03

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (LAT 45 06 43 LONG 110 47 37)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT													
24...	0800	1110	2.0	634	9.8	98	8.2	246	3.0	7.5	68	18.0	5.59
NOV													
29...	1315	787	2.0	630	11.1	93	8.3	281	-11.0	.5	77	20.2	6.37
DEC													
19...	0900	693	2.0	635	12.6	105	8.0	342	-3.0	.5	81	21.7	6.56
JAN													
12...	0900	705	2.6	626	11.7	106	8.2	342	8.0	3.0	83	21.9	6.77
FEB													
20...	1800	717	3.0	633	11.7	109	8.3	330	.00	4.5	85	22.5	6.91
MAR													
15...	0900	807	2.5	634	11.3	102	7.7	--e	5.0	3.5	78	20.7	6.33
MAY													
25...	1300	7980	25	633	10.3	109	8.0	89	26.0	9.5	27	7.08	2.37
JUN													
04...	1800	E5830	6.7	627	10.2	98	7.9	96	12.0	5.0	32	8.18	2.75
JUL													
19...	1500	E2660	5.8	631	8.8	116	8.3	167	23.5	19.5	44	11.1	3.89
AUG													
23...	1015	1390	--	632	10.5	137	8.4	219	27.5	19.0	58	14.8	5.04
SEP													
24...	1400	961	1.3	635	10.6	146	8.6	264	25.5	22.0	70	18.3	5.90

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT													
24...	4.81	1	24.1	71	87	--	12.3	.9	24.9	33.5	.24	521	174
NOV													
29...	5.85	1	27.3	--	--	--	15.2	1.0	30.1	43.1	.28	431	203
DEC													
19...	6.02	1	27.8	85	104	--	17.4	1.3	33.2	51.2	.32	438	234
JAN													
12...	6.98	1	30.9	84	103	--	17.7	1.2	33.7	50.0	.31	438	230
FEB													
20...	7.14	1	30.8	82	100	--	17.5	1.3	34.9	51.3	.32	453	234
MAR													
15...	6.36	1	27.6	77	94	--	14.9	1.2	29.9	42.2	.27	427	196
MAY													
25...	.23	.5	6.2	28	34	--	3.1	.3	15.0	6.7	.08	1290	60
JUN													
04...	1.83	.6	8.3	39	48	--	4.0	.4	16.3	10.9	.11	--	82
JUL													
19...	2.76	.9	14.1	46	56	--	6.8	.7	17.5	17.7	.15	--	107
AUG													
23...	4.45	1	20.4	68	83	--	11.0	1.0	21.5	26.8	.20	559	149
SEP													
24...	5.34	1	24.0	78	90	2	13.5	.9	25.4	35.1	--	--	172

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06191500 YELLOWSTONE RIVER AT CORWIN SPRINGS, MT (LAT 45 06 43 LONG 110 47 37)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L) AS C (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)
OCT 24...	168	E.023	.10	.17	.181	.013	--	.006	<.018	.017	--	--	1.5
NOV 29...	197	.157	.23	.30	.238	.007	--	.010	E.009	.021	--	--	1.3
DEC 19...	218	.187	.28	.25	.355	.011	--	.015	E.009	.022	--	--	1.2
JAN 12...	222	.133	.24	.45	.367	.009	.032	.018	E.011	.029	.3	--	1.3
FEB 20...	223	.122	.20	.28	.347	.015	.081	.017	E.012	.029	.5	--	1.4
MAR 15...	196	.107	.16	.28	.262	.010	.029	.013	E.011	.029	.2	--	1.4
MAY 25...	58	E.037	.15	.27	E.043	<.006	.115	.028	E.016	.110	1.5	<.1	3.1
JUN 04...	76	<.040	E.09	.18	E.036	<.006	.055	.020	E.011	.047	.5	<.1	2.3
JUL 19...	102	<.040	E.09	.13	.074	.008	.038	.017	<.020	.035	.3	<.1	2.5
AUG 23...	147	<.040	.10	.13	.094	.009	.038	.008	<.020	.015	.3	<.1	1.7
SEP 24...		<.040	.14	.14	--	.009	.036	.020	E.010	.015	.4	<.1	1.7

DATE	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C (00689)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L) AS AS (01000)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 24...	.3	E3k	E6k	--	40	3.8	2	6.0
NOV 29...	.4	E3k	E2k	--	50	10.2	7	15
DEC 19...	.3	E4k	E3k	--	50	19.3	3	5.6
JAN 12...	--	<1	E2k	--	50	15.5	5	9.5
FEB 20...	--	E3k	<1	--	60	14.7	5	9.7
MAR 15...	--	E1k	E1k	41.6	40	14.9	5	11
MAY 25...	1.5	<1	29	6.6	30	3.8	93	2000
JUN 04...	.5	E2k	E2k	10.3	20	4.8	23	--
JUL 19...	.3	E9k	E18k	15.9	20	E2.4	11	--
AUG 23...	.3	--	--	29.6	20	2.6	2	7.5
SEP 24...	.4	E3k	E1k	35.1	20	3.9	2	5.2

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

e -- Required equipment not functional/avail.

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, (PER- CENT SATUR- ATION) (00301)	PH WATER FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
OCT 03...	1100	910	--	675	--	--	8.2	510	12.0	12.0	210	56.9	17.3	
31...	0930	557	18	690	11.6	108	8.4	623	6.0	8.0	270	70.0	22.0	
NOV 17...	1100	487	5.2	678	14.8	114	7.7	684	.00	.00	290	76.6	22.8	
DEC 13...	1000	537	5.0	670	--	--	8.0	851	-7.0	.00	380	103	30.1	
JAN 09...	1100	694	6.0	668	13.5	106	7.9	723	4.0	.00	290	77.6	23.2	
FEB 23...	1000	808	--	663	12.3	97	8.2	657	2.0	.00	300	83.2	23.4	
MAR 08...	1500	335	13	669	11.9	116	8.2	705	17.0	8.5	290	76.7	23.9	
APR 18...	1000	282	9.0	667	9.3	95	8.3	757	14.0	10.0	290	79.1	23.7	
MAY 22...	1630	1510	28	674	10.3	113	8.1	200	24.0	14.0	76	20.6	5.91	
JUN 06...	1400	1420	24	674	9.8	110	8.2	263	19.0	15.0	93	24.9	7.51	
JUL 20...	1400	637	84	670	8.4	110	8.3	520	26.5	22.0	200	52.4	17.2	
AUG 20...	1400	100	--	669	--	--	7.6	1030	29.8	21.0	390	90.0	41.0	
SEP 06...	1400	120	21	671	8.2	94	7.6	1200	17.0	15.5	400	99.2	37.0	
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 03...	2.07	.7	24.0	134	158	2	2.3	.2	9.5	92.2	.44	791	322	
31...	2.07	.8	31.5	186	226	--	2.8	.3	7.1	148	.56	624	415	
NOV 17...	1.96	.8	30.7	200	244	--	2.3	.3	9.1	162	.60	577	439	
DEC 13...	2.48	.9	39.7	246	300	--	3.6	.4	11.5	243	.77	819	565	
JAN 09...	1.83	.8	31.6	194	237	--	2.9	.3	8.8	186	.65	901	481	
FEB 23...	1.84	.7	28.4	174	212	--	2.6	.4	9.5	177	.63	1010	464	
MAR 08...	2.09	.9	33.5	196	239	--	3.2	.4	7.4	198	.68	451	499	
APR 18...	2.00	.8	33.2	181	221	--	3.1	.4	6.8	220	.71	399	524	
MAY 22...	.82	.5	9.2	66	80	--	1.0	E.1	8.1	29.5	.18	554	136	
JUN 06...	.90	.5	11.4	81	99	--	1.2	E.1	6.1	48.2	.24	671	175	
JUL 20...	1.98	.9	27.8	153	186	--	2.0	.3	8.5	106	.44	562	327	
AUG 20...	3.45	2	70.5	226	256	10	4.8	.5	7.0	321	.98	194	718	
SEP 06...	2.85	1	56.5	244	298	--	4.9	.5	8.9	416	1.19	283	872	

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06208500 CLARKS FORK YELLOWSTONE RIVER AT EDGAR, MT (LAT 45 27 58 LONG 108 50 35)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C (00689)
OCT													
03...	287	<.020	.13	1.0	.528	<.010	--	.006	<.010	.285	--	2.2	4.3
31...	398	<.041	.10	.28	.609	E.004	--	<.006	<.018	.037	--	1.6	.6
NOV													
17...	429	<.041	E.06	.16	.811	E.004	--	<.006	<.018	.013	--	1.4	.5
DEC													
13...	586	<.041	.10	.19	1.13	E.004	--	E.003	<.018	.012	--	1.7	.4
JAN													
09...	452	<.041	.11	.23	.876	E.004	<.022	E.005	<.018	.022	.3	1.3	--
FEB													
23...	434	<.041	.11	.24	.767	E.004	.071	<.006	<.018	.036	1.0	1.4	--
MAR													
08...	465	<.041	.17	.26	.552	E.005	.069	E.005	<.018	.039	.7	2.1	--
APR													
18...	479	E.024	.13	.30	.486	.006	.048	E.004	<.018	.040	.9	1.9	--
MAY													
22...	116	<.040	.13	.28	.263	E.004	.133	.033	.020	.136	1.4	2.7	--
JUN													
06...	150	<.040	E.07	.21	.293	E.004	1.1	.021	E.012	.096	1.1	2.9	--
JUL													
20...	310	<.040	.27	.45	.570	.007	.251	.025	E.017	.153	2.6	2.8	--
AUG													
20...	676	<.040	.40	.56	.701	.016	.365	.006	<.020	.053	1.3	4.1	--
SEP													
06...	776	E.021	.33	.52	.892	.021	.214	E.005	<.020	.056	1.2	3.6	--

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT						
03...	--	--	<10	4.4	287	705
31...	24	42	<10	8.0	46	69
NOV						
17...	20	E15k	<10	8.7	37	49
DEC						
13...	66	41	<10	17.7	46	67
JAN						
09...	80	73	<10	13.7	27	51
FEB						
23...	<1	<1	<10	10.3	40	87
MAR						
08...	<1	E1k	<10	19.0	29	26
APR						
18...	<2	91	<10	23.8	33	25
MAY						
22...	E50k	94	M	6.0	90	367
JUN						
06...	90	170	<10	5.2	71	272
JUL						
20...	<2	120	<10	10.7	121	208
AUG						
20...	54	E3k	50	28.5	32	8.6
SEP						
06...	600	360	<10	30.9	101	33

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 30...	1400	3240	7.0	681	11.3	110	8.5	394	9.0	9.0	140	36.2	12.0
NOV 16...	1030	2680	6.0	684	13.9	106	8.2	434	-4.0	.00	170	44.2	14.9
DEC 13...	1300	6580	4.0	678	--	--	7.9	532	.00	.00	210	52.8	18.2
JAN 09...	1400	1680	2.0	675	14.1	112	8.1	444	7.0	1.1	160	42.4	13.9
FEB 05...	1100	1880	2.6	681	15.7	--	8.1	--e	6.0	.00	160	43.2	13.7
MAR 07...	0900	2130	--	686	13.8	--	7.7	--e	5.0	.5	150	38.2	12.1
APR 23...	1000	2290	18	684	10.2	99	8.1	364	7.0	9.0	130	35.4	11.3
MAY 21...	1230	11800	35	684	10	103	8.5	143	18.0	12.0	53	14.3	4.11
JUN 25...	1000	12800	25	680	8.7	105	8.2	152	21.0	19.0	62	16.4	5.05
JUL 03...	1300	7360	11	684	8.8	117	8.3	218	30.5	23.5	80	21.1	6.74
AUG 22...	1615	1300	--	678	--	--	8.6	423	32.0	24.9	150	35.9	14.9
SEP 25...	1200	1670	--	680	8.1	98	8.3	475	25.0	19.0	170	42.2	16.2
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 30...	2.95	.8	22.1	128	156	--	6.5	.5	11.9	63.2	.33	2140	245
NOV 16...	3.15	.8	24.1	128	156	--	8.0	.5	17.4	68.2	.37	1960	271
DEC 13...	3.74	.9	29.6	172	210	--	10.2	.7	18.3	100	.48	6270	353
JAN 09...	3.52	.8	24.8	148	181	--	7.6	.5	15.4	76.3	.37	1250	275
FEB 05...	3.34	.9	25.7	131	160	--	8.2	.6	15.8	73.7	.39	1450	286
MAR 07...	3.49	.8	22.7	116	142	--	7.9	.6	13.9	69.6	.35	1480	257
APR 23...	3.33	.8	22.2	113	138	--	8.0	.6	14.8	61.4	.32	1470	237
MAY 21...	1.42	.4	7.1	51	62	--	2.6	.2	13.1	14.6	.14	3310	104
JUN 25...	1.39	.5	8.5	48	59	--	3.5	.2	10.0	17.5	.13	3390	98
JUL 03...	1.92	.6	12.3	72	78	5	3.4	.3	10.2	25.2	.20	2860	144
AUG 22...	3.46	1.0	27.8	126	127	13	8.2	.6	10.6	73.8	.36	934	266
SEP 25...	3.55	.9	27.1	--	--	--	7.5	.6	9.1	82.0	.41	1340	298

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS STIES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

## 06214500 YELLOWSTONE RIVER AT BILLINGS, MT (LAT 45 48 00 LONG 108 28 00)

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C (00689)
OCT 30...	233	<.041	.16	.58	.135	E.004	--	<.006	<.018	.021	--	1.7	.6
NOV 16...	259	E.040	E.08	.20	.425	.006	--	<.006	<.018	.016	--	1.9	.8
DEC 13...	339	<.041	.10	.18	.516	E.005	--	E.004	<.018	.010	--	1.7	.4
JAN 09...	275	E.033	.15	.23	.380	E.005	<.022	E.004	<.018	.013	.2	1.3	--
FEB 05...	264	.043	.18	.24	.306	E.003	--	E.004	<.018	.012	--	1.3	--
MAR 07...	239	<.041	.14	.27	.206	E.003	.063	E.005	<.018	.036	.6	1.6	--
APR 23...	225	<.041	.15	.36	.118	E.004	.111	E.005	<.018	.047	.8	2.6	--
MAY 21...	88	<.040	.14	.37	.097	<.006	.122	.025	.030	.152	1.6	2.8	--
JUN 25...	91	E.022	E.08	.34	E.042	E.004	.249	.009	<.020	.081	1.6	2.0	--
JUL 03...	124	E.031	E.09	.27	E.036	.008	.072	.009	<.020	.039	E.7	2.0	--
AUG 22...	251	<.040	.20	.26	.060	E.003	.058	.006	<.020	.025	.4	2.0	--
SEP 25...	278	<.040	.18	.37	.150	E.004	.155	<.006	<.020	.037	1.1	2.0	--

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY) (80155)
OCT 30...	E21k	24	--	M	3.4	12	105
NOV 16...	20	30	--	10	8.3	9	65
DEC 13...	92	130	--	<10	14.1	9	160
JAN 09...	E2k	E3k	--	<10	7.6	4	18
FEB 05...	120	130	--	10	4.5	5	25
MAR 07...	E9k	75	13.1	M	10.2	16	92
APR 23...	E14k	140	14.7	20	11.1	30	185
MAY 21...	E20k	81	5.4	20	E2.9	118	3760
JUN 25...	E75k	83	4.9	M	<3.0	69	2380
JUL 03...	E25k	E38k	7.5	M	E1.7	25	497
AUG 22...	E24k	E20k	13.5	M	4.6	7	25
SEP 25...	15	41	10.5	M	7.8	23	104

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

e -- Required equipment not functional/avail.



## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06279500 BIGHORN RIVER AT KANE, WY (LAT 44 45 31 LONG 108 10 51)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 12...	1210	1280	47	666	8.2	83	8.3	982	15.0	9.5	340	87.8	28.4
NOV 29...	0945	1240	10	675	14.4	112	7.7	945	-10.0	.00	340	90.4	28.6
DEC 28...	0845	1190	8.0	677	13.8	107	7.5	938	1.0	.00	320	82.4	27.3
JAN 10...	1100	1080	8.0	663	13.2	104	8.1	986	5.0	.00	320	81.7	27.9
FEB 22...	1100	E1170	--	665	12.6	99	8.3	935	3.0	.00	320	82.3	26.8
MAR 08...	1100	1230	86	668	11.1	88	8.0	927	13.0	.5	320	80.4	28.1
APR 27...	1030	834	220	666	9.3	108	8.4	1110	24.0	16.0	370	92.9	32.8
MAY 22...	1100	1080	69	669	10.3	119	8.3	731	22.5	15.5	230	61.0	18.9
JUN 06...	1000	1270	110	667	8.8	102	8.1	843	19.0	16.0	290	76.3	24.7
JUL 05...	1200	648	3.5	665	9.2	129	8.5	1050	34.0	25.0	330	82.5	30.1
AUG 08...	1420	395	--	667	9.5	135	8.3	1080	35.0	26.0	300	70.9	29.6
SEP 06...	0900	544	--	661	8.2	102	8.1	1070	16.5	19.0	300	73.4	27.7
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 12...	3.89	2	88.1	194	237	--	14.4	.5	7.7	315	.92	2340	677
NOV 29...	4.02	2	78.6	189	231	--	16.1	.5	6.3	289	.91	2240	669
DEC 28...	3.69	2	74.6	203	248	--	16.1	.4	6.1	280	.89	2090	651
JAN 10...	4.30	2	81.0	202	246	--	19.2	.5	5.5	288	.90	1930	660
FEB 22...	4.09	2	72.4	198	242	--	17.2	.5	5.8	270	.88	--	646
MAR 08...	4.40	2	80.4	194	217	10	18.6	.5	5.3	283	.91	2210	666
APR 27...	4.55	2	101	210	251	2	17.5	.5	7.0	354	1.08	1790	794
MAY 22...	3.01	2	59.8	129	153	2	10.2	.3	4.9	220	.74	1600	547
JUN 06...	3.26	2	75.7	176	205	5	11.2	.4	6.4	266	.81	2030	593
JUL 05...	4.55	2	101	175	187	13	15.3	.5	5.3	341	1.00	1280	732
AUG 08...	4.72	3	107	164	181	10	17.9	.6	2.2	368	.97	761	714
SEP 06...	4.51	2	96.4	192	228	3	17.3	.5	6.2	353	1.00	1080	738

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06279500 BIGHORN RIVER AT KANE, WY (LAT 44 45 31 LONG 108 10 51)

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L) AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)
OCT 12...	664	<.041	.18	.57	.360	<.006	--	<.006	<.018	.157	--	--	3.8
NOV 29...	628	<.041	.23	.25	.359	<.006	.102	E.003	<.018	.044	.6	<.1	2.7
DEC 28...	615	E.034	.26	.32	.401	E.003	.042	.007	<.018	.022	.4	<.1	2.7
JAN 10...	631	.041	.27	.37	.373	E.003	<.022	.007	<.018	.019	.2	--	2.8
FEB 22...	599	.042	.23	.31	.301	E.003	.043	.006	<.018	.032	.6	--	2.8
MAR 08...	618	.050	.26	.64	.280	E.003	.245	.007	<.018	.118	2.0	--	3.1
APR 27...	737	<.041	.24	.66	.291	.010	E.063	.006	<.018	.174	E.3	--	3.7
MAY 22...	459	E.031	.32	.66	.880	.026	.188	.021	<.020	.136	1.7	--	4.2
JUN 06...	573	<.040	.31	.46	.671	.008	.423	.027	E.014	.197	3.7	--	3.7
JUL 05...	687	<.040	.41	.47	.294	.019	.405	.008	<.020	.109	E3.2	--	4.1
AUG 08...	701	.051	.38	.74	.427	.010	E.238	E.005	<.020	.063	2.4	--	4.6
SEP 06...	696	<.040	.41	.62	.384	E.004	.184	.007	<.020	.063	1.4	--	4.2

DATE	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C) (00689)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN) (01056)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 12...	1.5	190	250	<10	<3.2	245	847
NOV 29...	.6	29	45	<10	7.8	106	355
DEC 28...	.4	E32k	42	<10	4.1	61	196
JAN 10...	--	61	130	<10	6.2	30	88
FEB 22...	--	E21k	57	<10	6.5	44	--
MAR 08...	--	<2	67	<10	9.2	131	435
APR 27...	--	<2	56	<10	4.6	231	520
MAY 22...	--	E24k	44	<10	5.0	108	315
JUN 06...	--	120	210	<10	E2.7	186	638
JUL 05...	--	120	150	<10	<3.0	123	215
AUG 08...	--	E17k	29	<10	8.9	56	60
SEP 06...	--	E50k	68	<10	6.8	43	63

E -- Estimated value.

k -- Counts outside acceptable range (non-ideal colony count).

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 26...	0900	5870	12	696	10.4	100	8.5	613	8.0	9.5	220	57.7	19.1
NOV 27...	1430	8260	10	690	15.3	116	8.6	668	2.5	.00	230	57.4	20.5
DEC 12...	1200	3390	3.0	699	17.4	130	8.3	687	-15.0	.00	250	63.9	22.7
JAN 08...	1200	10700	6.0	695	12.9	97	8.1	661	.00	.00	240	61.9	20.2
FEB 06...	1100	9160	11	698	14.1	105	7.8	644	-7.0	.00	230	59.5	20.4
MAR 05...	1100	8680	27	700	13.7	102	8.4	657	2.0	.00	220	56.7	20.0
APR 26...	1100	4490	12	697	10.0	107	8.4	718	24.0	14.0	240	59.7	22.5
MAY 23...	1200	11600	41	699	9.7	104	8.1	307	23.0	14.5	110	27.4	9.08
JUN 26...	1030	15800	46	698	8.2	100	8.3	298	28.0	20.5	90	22.9	7.99
JUL 16...	1300	7770	340	692	7.5	98	8.5	506	28.0	23.5	170	42.3	14.8
AUG 21...	1200	2420	--	692	9.6	124	8.4	805	30.5	23.0	250	57.1	25.7
SEP 26...	1200	2800	11	692	9.6	110	8.4	709	--	17.0	220	52.1	22.5
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 26...	2.93	1	47.5	153	180	3	7.6	.5	6.4	159	.55	6360	401
NOV 27...	3.32	1	48.4	162	149	24	8.5	.4	10.1	166	.59	9630	432
DEC 12...	3.70	2	55.6	182	222	--	9.6	.5	11.0	188	.64	4330	473
JAN 08...	3.12	1	50.3	155	189	--	9.2	.5	10.8	170	.60	12700	439
FEB 06...	3.63	1	51.5	159	194	--	8.8	.5	9.4	174	.60	10900	441
MAR 05...	3.55	1	50.7	147	--	--	9.1	.5	7.7	174	.59	10200	437
APR 26...	4.01	2	59.1	160	190	2	10.5	.5	8.1	202	.68	6090	502
MAY 23...	2.02	.9	21.4	76	93	--	4.1	.3	12.6	63.3	.27	6200	198
JUN 26...	1.96	.8	18.5	78	94	1	4.7	.3	9.0	57.2	.26	8110	190
JUL 16...	3.40	1	39.2	116	142	--	6.4	.4	10.7	112	.43	6630	316
AUG 21...	4.40	2	70.4	155	172	8	10.8	.5	2.7	225	.71	3410	522
SEP 26...	3.68	2	55.4	--	--	--	10.5	.5	3.1	191	.62	3450	456

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C) (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C) (00689)
OCT 26...	394	<.041	.16	.30	.157	E.003	--	E.003	<.018	.027	--	2.6	.7
NOV 27...	414	<.041	.17	.31	.396	E.005	--	<.006	<.018	.064	--	2.5	.9
DEC 12...	467	<.041	.17	.28	.443	.006	--	E.005	<.018	.010	--	2.5	.5
JAN 08...	422	.053	.25	.26	.479	E.005	<.022	.006	E.013	.012	.2	2.2	--
FEB 06...	426	<.041	.20	.33	.396	E.004	--	E.004	<.018	.037	--	2.4	--
MAR 05...	412	E.022	.24	.45	.311	.008	.143	.010	<.018	.053	1.1	2.8	--
APR 26...	464	<.041	.17	.41	.084	E.005	.123	.006	<.018	.045	.6	2.9	--
MAY 23...	187	<.040	.17	.47	.170	.009	.187	.027	<.020	.136	1.5	3.5	--
JUN 26...	170	<.040	.12	.40	.049	.018	.267	.010	<.020	.102	2.0	2.4	--
JUL 16...	302	.069	.30	.79	.396	.020	.473	.037	.027	.298	3.9	3.8	--
AUG 21...	490	<.040	.28	.42	.052	<.006	.113	E.005	<.020	.032	.7	3.7	--
SEP 26...	438	<.040	.20	.36	.054	E.003	.132	E.005	<.020	.036	1.0	2.7	--
DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS/ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L) AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)
OCT 26...	E12k	E4k	2	.22	6.2	49.0	<.06	157	<.04	E.7	.17	1.1	M
NOV 27...	E4k	E9k	2	.18	5.6	50.6	<.06	164	<.04	<.8	.14	1.4	<10
DEC 12...	E6k	E5k	2	.21	5.5	53.3	<.06	184	<.04	<.8	.20	1.5	<10
JAN 08...	E13k	E9k	2	.21	6.0	48.6	<.06	165	<.04	<.8	.19	1.7	<10
FEB 06...	E8k	E9k	19	.19	7.6	47.9	<.06	169	<.04	<.8	.23	1.7	10
MAR 05...	15	24	2	.23	7.0	46.3	<.06	174	<.04	<.8	.20	1.8	<10
APR 26...	E3k	E8k	1	.23	8.2	47.4	<.06	203	<.04	<.8	.25	1.7	<10
MAY 23...	E30k	62	9	.15	4.9	26.0	<.06	89	E.02	E.6	.11	1.2	10
JUN 26...	E33k	E45k	4	.17	4.8	27.6	<.06	75	<.04	E.4	.09	1.1	<10
JUL 16...	--	150	3	.24	5.8	42.8	<.06	128	<.04	<.8	.11	1.7	<10
AUG 21...	E20k	E27k	2	.26	5.5	54.7	<.06	184	E.02	<.8	.23	2.5	M
SEP 26...	38	32	1	.23	5.4	44.6	<.06	202	E.03	<.8	.18	2.6	<10

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)
OCT 26...	<.08	40.3	3.5	2.1	.40	1.3	<1.0	548	<.04	1.6	<1	<.002	<.004
NOV 27...	<.08	42.4	3.8	2.0	.50	1.4	<1.0	575	<.04	1.4	2	<.002	<.004
DEC 12...	<.08	45.6	8.6	2.2	1.04	1.4	<1.0	619	<.04	1.5	1	<.002	<.004
JAN 08...	<.08	41.7	5.0	2.2	1.77	1.5	<1.0	599	<.04	2.3	2	<.002	<.004
FEB 06...	E.04	43.0	8.9	2.2	1.81	1.7	<1.0	588	<.04	2.5	1	<.002	<.004
MAR 05...	E.05	47.6	10.8	2.2	.40	1.6	<1.0	571	<.04	2.3	2	<.002	<.004
APR 26...	<.08	50.0	12.2	2.1	.15	1.3	<1.0	630	<.04	2.5	1	<.002	<.004
MAY 23...	<.08	21.2	4.0	1.1	.90	.6	<1.0	221	<.04	2.0	2	<.002	<.004
JUN 26...	.08	21.0	1.4	1.2	.54	.6	<1.0	244	<.04	1.5	<1	<.002	<.004
JUL 16...	<.08	31.8	.4	1.9	<.06	.9	<1.0	398	<.04	2.3	<1	<.002	<.004
AUG 21...	<.08	43.1	4.6	2.8	<.06	1.3	<1.0	667	<.04	1.6	1	<.002	<.004
SEP 26...	E.06	46.5	3.0	2.5	<.06	1.2	<1.0	610	<.04	1.3	8	<.002	<.004
DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
OCT 26...	<.002	<.005	E.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	<.005	<.005
NOV 27...	<.002	<.005	E.004	<.010	<.002	<.041	<.020	<.005	E.005	<.003	E.004	<.005	<.005
DEC 12...	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.005	<.005	<.005
JAN 08...	<.002	<.005	.007	<.010	<.002	<.041	<.020	<.005	E.010	<.003	<.006	<.005	<.005
FEB 06...	<.002	<.005	.008	E.003	<.002	<.041	<.020	<.005	.018	<.003	<.006	<.005	<.005
MAR 05...	<.002	<.005	.008	<.010	<.002	<.041	<.020	<.005	E.008	<.003	<.006	<.005	<.005
APR 26...	<.002	<.005	E.006	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
MAY 23...	<.002	<.005	.011	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
JUN 26...	<.002	<.005	E.003	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
JUL 16...	<.002	<.005	.013	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
AUG 21...	<.002	<.005	.013	<.010	<.002	<.041	<.020	<.005	E.007	<.003	E.004	<.005	<.005
SEP 26...	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

DATE	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
OCT 26...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
NOV 27...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
DEC 12...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
JAN 08...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.002	<.006	<.002
FEB 06...	<.021	E.001	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.003	<.006	<.002
MAR 05...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.003	<.006	<.002
APR 26...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.004	<.006	<.002
MAY 23...	<.021	.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.002	<.006	<.002
JUN 26...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
JUL 16...	<.021	<.030	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.030	E.009	<.006	<.002
AUG 21...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.007	<.006	<.002
SEP 26...	<.021	<.005	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
DATE	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)
OCT 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
NOV 27...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
DEC 12...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
JAN 08...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011
FEB 06...	<.007	E.001	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011
MAR 05...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.004	<.004	<.010	<.011	<.023	<.011
APR 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
MAY 23...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
JUN 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
JUL 16...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.009	<.004	<.010	<.011	<.023	<.011
AUG 21...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.004	<.004	<.010	<.011	<.023	<.011
SEP 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.002	<.004	<.010	<.011	<.023	<.011

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06295000 YELLOWSTONE RIVER AT FORSYTH, MT (LAT 46 15 58 LONG 106 41 24)

DATE	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (T/DAY) (80155)
OCT 26...	<.016	<.034	<.017	<.005	<.005	<.009	3.83	18	285
NOV 27...	<.016	<.034	<.017	<.005	<.002	<.009	4.14	106	2360
DEC 12...	<.016	<.034	<.017	<.005	<.002	<.009	4.17	4	37
JAN 08...	<.016	<.034	<.017	<.005	<.002	<.009	4.62	4	116
FEB 06...	<.016	<.034	<.017	<.005	E.001	E.002	4.09	18	445
MAR 05...	<.016	<.034	<.017	<.005	E.003	<.009	3.93	30	703
APR 26...	<.016	<.034	<.017	<.005	.008	<.009	4.01	29	352
MAY 23...	<.016	<.034	<.017	<.005	.010	<.009	1.41	95	2980
JUN 26...	<.016	<.034	<.017	<.005	E.001	<.009	1.45	98	4180
JUL 16...	<.016	<.034	<.017	<.005	.005	<.009	2.53	249	5220
AUG 21...	<.016	<.034	<.017	<.005	<.002	<.009	4.99	18	118
SEP 26...	<.016	<.034	<.017	<.005	<.002	<.009	4.26	24	181

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06298000 TONGUE RIVER NEAR DAYTON, WY (LAT 44 50 58 LONG 107 18 14)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
OCT 23...	1530	53	1.1	663	11.2	101	7.6	252	15.5	5.0	130	32.7	11.2	
NOV 28...	1450	54	1.0	663	12.7	100	7.4	257	.5	.00	140	36.9	12.3	
DEC 14...	1045	63	1.0	650	11.7	94	7.3	268	-5.0	.00	150	37.3	13.0	
JAN 12...	0750	46	--	--	11.5	--	7.7	264	-1.0	1.0	130	33.5	11.5	
FEB 12...	1615	59	1.3	650	--	--	7.3	268	-5.0	.00	130	34.5	11.8	
MAR 12...	1345	51	1.3	651	11.1	98	7.9	319	10.5	3.5	140	35.2	12.3	
APR 11...	1100	54	2.0	655	11.8	98	7.7	252	4.5	1.5	140	34.9	12.0	
MAY 10...	1215	273	14	659	10.1	96	7.8	146	20.0	7.0	72	19.6	5.61	
29...	1400	227	4.7	655	8.8	92	7.4	163	19.0	10.5	80	21.3	6.61	
JUN 08...	0830	150	2.6	661	10.0	104	7.2	184	19.0	10.5	93	24.1	7.89	
JUL 18...	1330	64	1.3	659	8.3	100	8.3	213	25.5	17.5	110	27.3	10.0	
AUG 15...	1440	53	1.8	661	8.2	99	8.5	228	29.0	17.5	120	28.5	10.9	
SEP 12...	1420	40	.9	--	--	--	8.7	231	20.5	12.5	120	28.7	10.6	
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 23...	.67	.0	1.3	127	155	--	1.0	E.1	5.9	4.8	.18	19.2	134	
NOV 28...	.75	.1	1.5	121	148	--	.8	E.1	7.0	5.3	.20	21.7	149	
DEC 14...	.67	.1	1.6	133	162	--	.6	E.1	7.3	5.6	.21	25.9	152	
JAN 12...	.65	.1	1.4	135	165	--	1.1	E.1	6.6	5.3	.20	18.5	149	
FEB 12...	.67	.1	1.4	140	171	--	1.0	E.1	6.4	5.3	.22	25.3	159	
MAR 12...	.60	.1	1.5	138	168	--	1.0	E.1	6.4	5.4	.20	20.0	145	
APR 11...	.57	.1	1.4	122	149	--	.7	E.1	5.8	5.3	.21	22.5	154	
MAY 10...	.87	.1	1.1	72	88	--	.6	E.1	5.6	2.8	.13	68.6	93	
29...	.61	.1	1.4	81	99	--	.5	<.2	6.5	3.0	.13	57.0	93	
JUN 08...	.56	.1	1.3	95	116	--	.5	E.1	6.5	3.4	.15	43.7	108	
JUL 18...	.66	.1	1.5	105	121	4	.6	E.1	5.6	4.3	.16	19.7	114	
AUG 15...	.67	.1	1.5	121	140	4	.7	E.1	5.2	4.8	.16	17.0	119	
SEP 12...	.78	.1	1.5	119	137	4	.6	E.1	5.6	4.5	.18	14.0	130	



## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06298000 TONGUE RIVER NEAR DAYTON, WY (LAT 44 50 58 LONG 107 18 14)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P (00671)	PHOS- PHORUS TOTAL (MG/L) AS P (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (MG/L) AS C (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C (00681)
OCT 23...	134	<.041	<.10	E.06	E.046	<.006	--	<.006	<.018	<.004	--	--	1.1
NOV 28...	138	<.041	<.10	E.04	.201	<.006	.046	<.006	<.018	<.004	.3	<.1	.91
DEC 14...	147	<.041	E.08	.12	.247	<.006	.045	E.004	<.018	.006	.4	--	1.0
JAN 12...	142	<.041	E.07	.08	.229	<.006	<.022	<.006	<.018	.004	.3	--	.82
FEB 12...	146	<.041	E.07	<.08	.222	<.006	.055	E.004	.019	.005	.5	--	.73
MAR 12...	145	<.041	<.10	<.08	.082	<.006	<.022	<.006	<.018	.005	.2	--	.86
APR 11...	134	<.041	E.06	.09	E.046	<.006	.023	E.003	<.018	.007	.3	--	1.3
MAY 10...	79	<.041	.20	.41	E.032	E.004	.050	.007	<.018	.051	1.0	--	4.6
29...	89	--	--	--	--	--	.069	--	--	--	.7	--	3.2
JUN 08...	101	<.040	E.08	.13	E.023	<.006	<.022	E.004	<.020	.014	.5	--	2.5
JUL 18...	114	<.040	.10	.13	.135	<.006	<.022	<.006	<.020	.009	.3	--	2.0
AUG 15...	125	E.021	E.08	.12	E.026	<.006	.044	<.006	<.020	.010	.3	--	1.5
SEP 12...	123	<.040	E.08	.09	E.029	E.003	<.022	<.006	<.020	E.003	.2	--	1.5

DATE	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C (00689)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	IRON, DIS- SOLVED (UG/L) AS FE (01046)	MANGA- NESE, DIS- SOLVED (UG/L) AS MN (01056)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)
OCT 23...	.3	E2k	E2k	<10	<3.2	1	.14
NOV 28...	.3	E4k	E10k	M	<3.2	3	.44
DEC 14...	--	E2k	E5k	<10	<3.2	6	1.0
JAN 12...	--	E2k	E3k	<10	<3.2	1	.12
FEB 12...	--	E1k	E1k	<10	<3.2	2	.32
MAR 12...	--	<1	<1	M	<3.2	1	.14
APR 11...	--	<1	<1	<10	<3.2	2	.29
MAY 10...	--	24	20	50	<3.2	19	14
29...	--	42	43	20	<3.0	7	4.3
JUN 08...	--	49	38	10	<3.0	4	1.6
JUL 18...	--	E8k	10	<10	<3.0	1	.17
AUG 15...	--	30	27	M	E1.7	3	.43
SEP 12...	--	E14k	E8k	M	E1.9	2	.22

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	
OCT 16...	1125	31	180	675	--	--	8.3	3940	15.0	9.0	1100	201	153	
25...	0800	1.8	150	673	7.9	76	7.9	1740	9.5	8.0	350	71.4	40.9	
NOV 15...	1340	1.6	10	670	11.5	91	7.9	3690	-3.5	.00	1100	231	138	
DEC 12...	1600	1.2	16	675	--	--	7.7	3610	-20.0	.00	1100	215	129	
JAN 10...	1430	1.5	--	--	--	--	7.9	3480	6.5	.00	920	185	111	
FEB 15...	1640	1.6	--	--	--	--	7.7	3540	-10.0	.00	970	206	111	
MAR 05...	1215	64	150	679	10	77	7.6	656	4.5	.00	130	29.3	14.8	
14...	1445	70	350	670	10.5	87	7.5	1230	1.0	2.0	250	48.0	31.5	
APR 12...	0815	15	500	674	9.3	81	8.0	2290	2.0	4.0	610	112	79.0	
MAY 08...	1530	4.7	39	675	9.9	116	8.0	3280	26.0	16.5	860	164	110	
JUN 06...	0845	3.2	13	665	6.8	80	8.0	3570	15.0	16.0	900	150	127	
JUL 13...	0900	8.4	170	680	5.9	78	7.9	3250	24.0	23.0	820	149	108	
25...	1235	314	--	676	4.8	60	7.4	358	21.0	20.0	75	17.6	7.38	
AUG 15...	0800	.53	120	678	5.9	74	7.8	3120	19.5	19.5	830	159	104	
SEP 11...	0830	.29	70	--	--	--	8.1	3770	12.0	13.0	1100	217	140	
		POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT 16...	25.7	7	552	260	317	37.8	.7	6.9	2060	4.63	285	3400	3190	
25...	14.3	6	239	199	243	27.3	.6	5.9	681	1.71	6.12	1260	1200	
NOV 15...	29.2	7	514	379	462	103	.8	11.1	1680	4.22	13.4	3100	2940	
DEC 12...	25.1	8	582	483	589	65.5	.9	12.6	1730	4.40	10.5	3230	3060	
JAN 10...	21.4	7	482	471	575	44.3	.8	12.0	1520	3.82	11.4	2810	2660	
FEB 15...	21.9	8	552	485	592	80.5	.9	13.7	1500	3.95	12.6	2910	2780	
MAR 05...	10.8	3	73.6	98	120	14.7	.2	5.1	202	.68	86.4	500	413	
14...	11.8	3	120	122	149	12.2	.3	7.7	376	1.04	144	764	684	
APR 12...	14.2	5	303	250	305	6.1	.4	10.4	971	2.46	71.8	1810	1650	
MAY 08...	19.2	7	460	359	438	40.9	.6	7.5	1490	3.69	34.4	2720	2510	
JUN 06...	24.0	7	492	249	304	50.5	.6	4.0	1680	4.07	26.0	3000	2680	
JUL 13...	20.1	7	475	235	287	37.0	.7	5.4	1510	3.55	59.1	2610	2450	
25...	7.86	2	39.2	66	81	8.3	.3	5.4	75.9	.31	191	225	203	
AUG 15...	20.0	7	438	382	466	74.6	.7	14.6	1250	3.31	3.49	2440	2290	
SEP 11...	20.8	7	502	401	489	141	.7	12.3	1590	4.11	2.36	3020	2870	

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	CARBON, INOR- GANIC, TOTAL (MG/L AS C) (00688)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)
OCT													
16...	<.041	.38	.83	<.047	<.006	--	.007	<.018	.099	--	--	8.1	.3
25...	<.041	.49	.72	.116	.009	--	E.004	<.018	.055	--	--	10	2.2
NOV													
15...	<.041	.41	.83	E.026	<.006	.146	.006	<.018	.018	<.1	--	8.9	1.1
DEC													
12...	.144	.47	.58	.052	E.003	.042	E.004	<.018	.015	.3	<.1	6.5	.3
JAN													
10...	.161	.50	.58	.131	E.005	<.022	E.005	<.018	.015	.1	--	6.1	--
FEB													
15...	.051	.31	.24	.239	<.006	.051	E.003	<.018	.008	.3	--	5.2	--
MAR													
05...	.342	2.1	3.0	.368	.017	.943	.400	.349	.590	6.0	--	38	--
14...	.218	1.2	1.9	.264	.018	.726	.082	.031	.270	3.5	--	17	--
APR													
12...	<.041	.74	1.2	<.047	<.006	.469	.019	<.018	.137	3.3	--	15	--
MAY													
08...	<.041	.51	.73	<.047	E.003	.251	.007	<.018	.036	1.3	--	10	--
JUN													
06...	<.040	.33	.64	<.050	<.006	.137	E.005	<.020	.039	1.0	--	8.0	--
JUL													
13...	<.040	.56	.96	<.050	.006	.333	.012	<.020	.075	2.1	--	12	--
25...	<.040	.48	5.9	.286	.016	5.2	.020	<.020	1.51	27	--	16	--
AUG													
15...	E.038	.66	1.0	<.050	<.006	.364	.010	<.020	.084	2.4	--	12	--
SEP													
11...	E.026	.43	.51	<.050	E.003	.127	.006	<.020	.055	1.1	--	8.6	--

DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
OCT													
16...	1500	1100	<2	.24	1.0	--	35.4	--	<.12	329	--	<.07	--
25...	580	360	2	.28	.8	--	31.7	39.5	<.06	124	--	.04	--
NOV													
15...	--	64	3	.22	.9	--	67.0	62.1	<.06	517	--	.05	--
DEC													
12...	E26k	42	2	.07	.8	--	46.7	43.4	<.06	358	--	.52	--
JAN													
10...	E12k	E10k	2	.05	.4	--	15.5	30.4	<.06	147	--	.35	--
FEB													
15...	E18k	E7k	2	.09	.8	--	30.8	27.9	<.06	250	--	.08	--
MAR													
05...	70	140	12	.10	.8	--	18.1	34.1	<.06	59	--	.05	--
14...	--	--	119	.21	1.3	--	26.1	45.3	<.06	98	--	.09	--
APR													
12...	150	160	5	.33	E1.5	3	59.0	84.7	<.06	132	156	.13	.11
MAY													
08...	55	56	1	.11	E1.2	E1	57.4	55.6	<.06	222	213	.14	<.07
JUN													
06...	160	160	4	.26	<2.0	M	42.5	45.2	<.10	403	381	<.07	E.04
JUL													
13...	260	350	3	.51	E1.3	2	96.7	106	<.10	295	287	<.07	E.04
25...	--	--	2	.33	E1.1	--	29.8	465	<.06	48	--	<.04	--
AUG													
15...	E27k	E32k	4	.48	E2.0	--	128	130	<.10	225	--	.42	--
SEP													
11...	<1	E8k	<2	.26	E1.4	E2	104	95.5	<.10	236	244	E.04	E.04

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06324970 LITTLE POWDER RIVER ABOVE DRY CREEK NEAR WESTON, WY (LAT 44 55 37 LONG 105 21 10)

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)
OCT													
16...	2.8	--	.87	5.5	--	<10	--	<.16	--	94.7	9.4	--	3.2
25...	E.6	--	.53	3.3	--	<10	--	E.04	--	43.5	46.0	--	2.3
NOV													
15...	1.7	--	.85	7.1	--	E20	--	<.08	--	163	77.0	--	8.0
DEC													
12...	<.8	--	.86	7.3	--	<30	--	.12	--	120	106	--	4.7
JAN													
10...	<.8	--	.42	3.2	--	<30	--	<.08	--	41.8	67.0	--	1.7
FEB													
15...	<.8	--	.84	5.7	--	<30	--	.08	--	104	163	--	2.8
MAR													
05...	<.8	--	.60	3.9	--	110	--	.18	--	17.8	99.3	--	.9
14...	<.8	--	.99	3.7	--	130	--	.19	--	22.2	92.1	--	2.1
APR													
12...	<.8	7	.96	6.5	10.2	E20	3340	.11	6	44.5	80.0	151	2.3
MAY													
08...	.8	<1	.95	6.6	7.1	<30	420	E.04	<2	63.5	96.8	158	2.5
JUN													
06...	<4.0	<1	.55	8.8	6.9	<30	510	<.20	<2	84.0	44.1	85	3.9
JUL													
13...	<.8	1	.72	6.4	5.5	<10	1150	<.20	3	76.2	45.6	153	3.3
25...	<.8	--	.70	1.6	--	20	--	.09	--	12.3	26.8	--	1.1
AUG													
15...	E.5	--	1.17	20.2	--	<30	--	E.09	--	47.6	247	--	3.0
SEP													
11...	<.8	<1	1.03	13.3	7.7	<30	720	<.20	<2	57.9	257	286	2.8
DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
OCT													
16...	3.49	--	1.3	--	<2.0	3010	<.08	2.2	4	--	18.2	272	23
25...	3.18	--	1.9	--	<1.0	1060	E.02	1.0	3	--	9.74	119	.58
NOV													
15...	3.61	--	1.7	--	<1.0	3260	.88	3.1	5	--	18.4	201	.87
DEC													
12...	3.63	--	1.4	--	<1.0	3050	.07	1.2	7	--	19.8	181	.59
JAN													
10...	1.78	--	.7	--	<1.0	2660	<.04	3.9	3	--	9.48	118	.48
FEB													
15...	2.38	--	1.8	--	<1.0	2700	<.04	4.4	6	--	17.8	63	.27
MAR													
05...	1.57	--	.5	--	<1.0	364	E.03	1.4	6	--	2.01	145	25
14...	2.60	--	.9	--	<1.0	667	<.04	1.8	6	--	5.40	283	53
APR													
12...	2.69	9	1.4	1.7	<1.0	1390	.05	3.2	8	27	16.9	376	15
MAY													
08...	2.01	13	1.1	1.5	<1.0	2180	.07	2.3	7	6	18.8	54	.68
JUN													
06...	1.60	5	.9	1.9	<2.0	2500	<.08	.9	13	9	15.0	101	.88
JUL													
13...	1.88	6	1.4	2.3	<2.0	2080	<.08	1.6	5	11	11.5	144	3.3
25...	3.17	--	1.1	--	<1.0	202	<.04	1.7	2	--	1.01	5150	4360
AUG													
15...	2.14	--	.8	--	<2.0	1900	<.08	2.1	16	--	12.9	106	.15
SEP													
11...	<.10	6	.9	1.1	<2.0	2640	<.08	1.1	9	8	22.0	137	.11

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06326500 POWDER RIVER NEAR LOCATE, MT (LAT 46 25 48 LONG 105 18 34)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	
OCT 25...	0830	119	43	690	11.3	103	8.5	1820	7.0	7.0	530	121	54.6	
NOV 28...	0830	E90	92	699	11.3	85	8.0	2230	-1.0	.00	680	154	72.1	
DEC 14...	1300	E70	--	695	11.4	86	7.8	2280	-11.0	.00	750	170	78.2	
JAN 04...	1500	E100	20	700	8.4	64	7.9	2180	5.0	.00	680	160	68.8	
FEB 07...	1500	840	14	701	11.8	88	7.9	1990	-15.0	.00	630	150	62.4	
MAR 28...	1500	E550	950	690	12.7	116	8.4	2020	11.5	7.0	--	133	56.0	
APR 17...	0900	314	880	705	11.3	95	8.3	2570	10.0	4.5	640	143	67.4	
MAY 24...	0800	36	5.7	703	12.3	119	8.0	2550	17.0	10.0	620	130	70.8	
JUN 27...	0830	69	--	698	8.3	103	8.3	2940	27.0	21.0	670	138	79.0	
JUL 17...	1400	603	>1000	695	7.1	99	8.0	2100	30.0	27.0	580	135	58.2	
AUG 22...	0945	6.8	1.4	697	10.1	138	8.1	2710	28.5	26.3	570	121	64.0	
SEP 27...	1300	7.8	--	699	9.8	123	8.3	2900	17.0	22.0	480	108	51.6	
DATE		POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 25...	6.80	4	210	212	259	--	78.0	.4	6.2	667	--	--	1350	
NOV 28...	7.48	4	252	308	376	--	84.5	.3	10.2	821	2.36	--	1730	
DEC 14...	7.54	4	282	350	427	--	100	.4	12.1	802	2.37	--	1740	
JAN 04...	7.27	4	253	322	393	--	105	.4	12.1	746	2.27	--	1670	
FEB 07...	6.67	4	235	284	346	--	105	.4	10.1	688	2.12	3530	1560	
MAR 28...	6.54	4	236	208	249	2	82.5	.4	7.5	756	--	--	1530	
APR 17...	8.49	6	339	254	295	7	122	.5	8.1	1010	2.69	1680	1980	
MAY 24...	9.27	7	378	270	325	2	97.3	.4	12.7	1000	2.65	190	1950	
JUN 27...	11.7	7	435	216	259	2	131	.4	11.7	1200	3.05	417	2240	
JUL 17...	11.6	5	269	126	154	--	106	.5	9.3	820	2.21	2650	1630	
AUG 22...	12.5	8	426	268	300	13	81.0	.4	14.3	1080	2.74	36.9	2010	
SEP 27...	10.6	9	478	--	--	--	80.4	.3	10.0	1150	2.86	44.3	2100	

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06326500 POWDER RIVER NEAR LOCATE, MT (LAT 46 25 48 LONG 105 18 34)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C) (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C) (00689)
OCT 25...	--	<.041	.21	.48	<.047	<.006	--	<.006	--	.099	--	4.4	1.7
NOV 28...	1590	E.034	.31	.42	.186	<.006	--	<.006	<.018	.058	--	4.9	.6
DEC 14...	1670	.041	.25	.58	.307	<.006	--	E.005	<.018	.033	--	4.4	.5
JAN 04...	1550	.075	.24	.35	.373	E.005	.046	E.004	<.018	.021	.6	3.6	--
FEB 07...	1430	<.041	.26	.26	.375	<.006	--	<.006	<.018	.029	--	4.1	--
MAR 28...	--	.057	.27	1.3	.414	E.004	.396	.009	<.018	.489	4.6	4.3	--
APR 17...	1860	<.041	.24	1.1	.287	<.006	.798	.011	<.018	.345	8.7	4.8	--
MAY 24...	1860	<.040	.20	.26	.401	<.006	.070	<.006	<.020	.016	.5	5.0	--
JUN 27...	2140	<.040	.31	.59	<.050	<.006	.237	E.004	<.020	.080	2.4	6.0	--
JUL 17...	1490	<.040	.40	30	1.58	E.003	29	.014	<.020	12.1	300	7.6	--
AUG 22...	1960	<.040	.30	.30	<.050	<.006	.034	<.006	<.020	.008	.3	5.4	--
SEP 27...	2060	<.040	.27	.39	<.050	<.006	.107	E.003	<.020	.045	.9	6.3	--
DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS/ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L) AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	ARSENIC TOTAL (UG/L) AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	BARIUM, TOTAL RECOV- ERABLE (UG/L) AS BA) (01007)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	BORON, TOTAL RECOV- ERABLE (UG/L) AS B) (01022)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L) AS CD) (01027)
OCT 25...	E37k	35	3	.18	.7	--	44.0	--	<.06	166	--	E.02	--
NOV 28...	21	E27k	2	.10	.8	--	55.5	--	<.06	180	--	E.03	--
DEC 14...	E25k	E18k	2	.07	.7	--	53.8	--	<.06	200	--	E.03	--
JAN 04...	E10k	E11k	1	.10	.5	--	47.7	--	<.06	199	--	<.04	--
FEB 07...	30	39	5	.10	.7	--	40.4	--	<.06	176	--	E.02	--
MAR 28...	<2	E10k	--	--	--	6	--	165	--	--	162	--	.35
APR 17...	<5	E10k	2	.31	1.2	5	48.1	138	<.06	237	204	<.04	.23
MAY 24...	27	34	<2	.21	.9	<2	45.3	44.3	<.10	202	212	<.07	.06
JUN 27...	660	260	3	.32	1.2	E1	100	106	<.10	268	250	E.04	E.05
JUL 17...	--	--	3	.50	1.1	34	76.5	941	<.06	263	166	E.02	10.1
AUG 22...	E9k	E6k	2	.25	.9	E2	76.4	68.0	<.10	286	285	<.07	.07
SEP 27...	--	--	<2	.23	.8	E1	61.5	64.0	<.10	256	261	<.07	<.07

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06326500 POWDER RIVER NEAR LOCATE, MT (LAT 46 25 48 LONG 105 18 34)

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR) (01030)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)
OCT 25...	1.0	--	.26	3.3	--	<10	--	<.08	--	55.4	1.5	--	3.6
NOV 28...	<.8	--	.30	4.2	--	<30	--	<.08	--	65.7	2.8	--	2.6
DEC 14...	<.8	--	.39	4.2	--	<30	--	E.07	--	67.6	3.7	--	2.4
JAN 04...	<.8	--	.34	3.5	--	<30	--	E.06	--	66.3	5.0	--	2.0
FEB 07...	<.8	--	.39	4.0	--	<10	--	<.08	--	63.9	4.6	--	2.0
MAR 28...	<.8	6	--	--	14.6	--	11900	--	7	--	--	368	--
APR 17...	<.8	5	.36	6.4	11.5	<10	8730	.10	6	102	1.8	271	3.6
MAY 24...	E.5	<1	.29	5.0	9.7	<10	80	<.20	<1	68.1	10.3	15	3.8
JUN 27...	E.7	1	.31	8.7	5.8	<30	1030	.20	<2	94.3	1.0	39	5.0
JUL 17...	<.8	125	.20	7.7	199	<30	181000	<.08	191	69.0	.2	8930	5.8
AUG 22...	<.8	<1	.22	9.1	3.5	<30	80	<.20	<2	63.0	7.8	16	4.7
SEP 27...	<.8	M	.29	2.8	5.1	<30	660	<.20	<2	63.4	14.4	39	5.1

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDIMENT, SUS- PENDEDED (MG/L) (80154)	SEDIMENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT 25...	1.38	--	1.5	--	<1.0	1250	<.04	1.2	2	--	10.2	166	53
NOV 28...	1.48	--	1.9	--	<1.0	1670	<.04	1.1	3	--	12.2	128	--
DEC 14...	2.05	--	1.9	--	<1.0	1830	E.03	1.5	3	--	12.7	135	--
JAN 04...	.80	--	1.6	--	<1.0	1800	<.04	.7	3	--	11.2	40	--
FEB 07...	3.65	--	2.1	--	<1.0	1610	<.04	1.9	4	--	9.93	76	172
MAR 28...	--	19	--	3.1	--	--	--	--	--	41	--	911	--
APR 17...	1.02	17	4.0	3.6	<1.0	1770	.04	2.6	6	34	13.2	742	629
MAY 24...	2.00	7	1.3	2.1	<2.0	1640	.18	1.5	4	5	13.3	40	3.9
JUN 27...	2.68	4	1.8	2.2	<2.0	1860	<.08	1.4	5	8	12.9	148	28
JUL 17...	.81	212	4.5	5.4	<1.0	1660	E.03	1.7	3	554	8.30	24700	40200
AUG 22...	.15	4	E.5	1.0	<2.0	1620	<.08	1.0	6	3	14.1	45	.83
SEP 27...	.20	6	E.5n	1.5	<2.0	1540	.13	.8	8	7	14.0	99	2.1

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

n -- Below the NDV.

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM

YELLOWSTONE RIVER BASIN  
Fixed Station Network

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
OCT 25...	1400	6450	11	626	9.8	106	8.6	698	11.0	10.0	240	57.3	23.2
NOV 20...	1300	4970	--	721	13.7	99	8.3	727	-2.0	.00	280	68.7	26.9
DEC 07...	1200	6020	20	711	13.4	99	8.4	767	.00	.00	260	62.9	24.2
JAN 04...	0900	6320	12	707	13.3	98	8.2	777	4.0	.00	260	64.9	23.7
FEB 07...	0900	7340	11	717	14.3	105	7.9	758	-10.0	.00	270	66.5	24.4
MAR 28...	0900	7280	450	707	14.5	107	8.0	808	2.0	.00	240	58.7	23.4
APR 16...	1600	5760	230	715	11.3	100	8.4	952	6.0	7.0	300	70.7	29.3
MAY 23...	1800	11300	99	709	10.1	108	8.0	306	21.0	15.0	100	27.1	8.77
JUN 26...	1700	14200	67	716	8.7	111	8.4	383	26.0	24.0	120	29.1	10.8
JUL 17...	0900	6110	170	706	7.1	95	8.6	550	25.0	26.0	180	43.4	16.4
AUG 21...	2015	1230	27	627	--	--	8.3	888	29.0	25.5	260	58.1	28.3
SEP 26...	1900	3440	--	709	9.8	111	8.4	767	25.0	18.0	220	49.6	24.4
DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS- SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
OCT 25...	3.76	2	61.0	165	202	--	9.9	.5	3.9	187	.61	7850	451
NOV 20...	4.01	2	73.6	195	238	--	12.0	.5	10.8	230	.78	7720	575
DEC 07...	3.57	2	61.9	--	--	--	11.0	.5	9.9	201	.68	8160	502
JAN 04...	3.77	2	60.1	182	222	--	12.0	.5	12.3	202	.71	8910	522
FEB 07...	3.67	2	62.8	188	229	--	12.1	.5	9.3	213	.71	10400	525
MAR 28...	3.78	2	70.0	154	181	4	14.7	.4	5.5	235	.75	10900	552
APR 16...	5.11	3	101	176	210	2	20.1	.5	7.6	303	.89	10200	656
MAY 23...	1.96	.9	22.1	75	92	--	4.2	.3	11.8	62.4	.27	6100	200
JUN 26...	2.26	1	29.2	96	116	1	5.0	.3	8.4	85.7	.33	9200	240
JUL 17...	3.45	2	46.7	131	137	11	6.8	.4	9.0	127	.48	5870	356
AUG 21...	4.89	2	85.0	172	198	6	12.2	.5	6.0	243	.79	1930	582
SEP 26...	3.86	2	64.2	--	--	--	11.1	.5	2.8	212	.66	4500	484



## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L) AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS- SOLVED (MG/L) AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L) AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L) AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L) AS N) (00613)	NITRO- GEN,PAR TICULATE SUSP (MG/L) AS N) (49570)	PHOS- PHORUS DIS- SOLVED (MG/L) AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L) AS P) (00671)	PHOS- PHORUS TOTAL (MG/L) AS P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L) AS C) (00694)	CARBON, ORGANIC DIS- SOLVED (MG/L) AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L) AS C) (00689)
OCT 25...	447	<.041	.17	.35	.112	.006	--	E.003	<.018	.030	--	2.8	.9
NOV 20...	547	.059	.42	.30	.518	.006	--	.039	.024	.014	--	2.7	.3
DEC 07...	492	<.041	.14	.20	.433	E.003	--	<.006	<.018	.021	--	3.4	.5
JAN 04...	492	.094	.25	E.04	.593	.009	.052	<.006	<.018	.023	.5	2.3	--
FEB 07...	508	<.041	.21	.22	.482	<.006	--	E.003	<.018	.017	--	2.4	--
MAR 28...	505	.047	.23	1.0	.133	<.006	.367	.008	<.018	.328	3.2	2.9	--
APR 16...	645	<.041	.19	.70	.307	.006	.415	E.003	<.018	.160	3.2	3.3	--
MAY 23...	185	<.040	.18	.65	.195	.009	.420	.020	<.020	.199	4.1	4.3	--
JUN 26...	229	<.040	.13	.56	<.050	<.006	.498	E.003	<.020	.161	4.3	2.3	--
JUL 17...	332	<.040	.17	.58	E.023	<.006	.453	.006	<.020	.167	5.3	4.5	--
AUG 21...	543	<.040	.25	.32	E.024	<.006	.136	E.004	<.020	.030	1.0	4.6	--
SEP 26...	475	<.040	.21	.42	<.050	<.006	.159	E.004	<.020	.043	1.6	3.0	--
DATE	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI- FORM, FECAL, 0.7 UM-MF (COLS/ 100 ML) (31625)	ALUM- INUM, DIS- SOLVED (UG/L) AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L) AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L) AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L) AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L) AS BE) (01010)	BORON, DIS- SOLVED (UG/L) AS B) (01020)	CADMIUM DIS- SOLVED (UG/L) AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L) AS CR) (01030)	COBALT, DIS- SOLVED (UG/L) AS CO) (01035)	COPPER, DIS- SOLVED (UG/L) AS CU) (01040)	IRON, DIS- SOLVED (UG/L) AS FE) (01046)
OCT 25...	E12k	E3k	3	.23	4.4	52.2	<.06	154	<.04	E.6	.19	1.4	<10
NOV 20...	E15k	E9k	2	.21	4.4	66.4	<.06	194	E.02	<.8	.22	1.8	<10
DEC 07...	E4k	E1k	1	.20	4.4	55.5	<.06	162	E.02	<.8	.21	1.7	<10
JAN 04...	E8k	E13k	2	.19	4.8	56.7	<.06	182	<.04	<.8	.18	1.6	<10
FEB 07...	E6k	E7k	1	.18	6.1	51.0	<.06	168	E.03	<.8	.23	2.0	<10
MAR 28...	<2	E5k	<1	.15	2.6	47.7	<.06	162	E.03	<.8	.24	2.1	<10
APR 16...	<3	E10k	1	.27	4.1	56.0	<.06	218	E.02	<.8	.25	2.9	<10
MAY 23...	<2	E40k	5	.17	4.4	29.4	<.06	64	<.04	E.5	.10	1.5	10
JUN 26...	E53k	E56k	3	.19	4.3	30.4	<.06	83	<.04	E.4	.10	1.7	<10
JUL 17...	E26k	110	3	.27	5.5	48.1	<.06	137	<.04	<.8	.13	2.0	<10
AUG 21...	E17k	E11k	2	.25	3.1	73.9	<.06	200	<.04	E.5	.22	3.0	10
SEP 26...	--	E2k	2	.22	3.0	45.7	<.06	213	E.02	<.8	.16	3.4	<10

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	THAL- LIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)
OCT 25...	<.08	38.9	4.2	2.2	.64	1.1	<1.0	591	<.04	1.2	<1	<.002	<.004
NOV 20...	<.08	48.0	7.1	2.6	1.38	1.6	<1.0	729	.36	1.3	1	<.002	<.004
DEC 07...	<.08	43.2	5.1	2.1	2.29	1.5	<1.0	630	<.04	1.4	1	<.002	<.004
JAN 04...	<.08	45.5	4.7	2.3	.94	1.5	<1.0	683	<.04	1.9	2	<.002	<.004
FEB 07...	<.08	42.6	5.1	2.2	2.54	1.8	<1.0	673	<.04	2.5	2	<.002	<.004
MAR 28...	<.08	42.2	6.6	1.9	1.50	1.1	<1.0	594	<.04	1.1	2	<.002	<.004
APR 16...	<.08	65.9	3.1	2.3	.80	1.6	<1.0	807	E.03	2.4	2	<.002	<.004
MAY 23...	<.08	17.2	2.3	1.1	.95	.5	<1.0	224	<.04	1.9	1	<.002	<.004
JUN 26...	.09	22.8	.4	1.3	.67	.6	<1.0	296	<.04	1.8	1	<.002	<.004
JUL 17...	<.08	34.9	.5	2.1	.09	1.0	<1.0	447	<.04	2.4	1	<.002	<.004
AUG 21...	<.08	43.6	15.7	2.8	.22	1.1	<1.0	698	<.04	1.6	2	<.002	<.004
SEP 26...	E.07	43.1	2.7	2.4	.30	1.1	<1.0	603	<.04	1.0	7	<.002	<.004
DATE	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED REC (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)
OCT 25...	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	E.007	<.003	E.004	<.005	<.005
NOV 20...	<.002	<.005	E.006	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.005	<.005	<.005
DEC 07...	<.002	<.005	E.006	<.010	<.002	<.041	<.020	<.005	E.006	<.003	E.002	<.005	<.005
JAN 04...	<.002	<.005	E.006	<.010	<.002	<.041	<.020	<.005	E.010	<.003	E.004	<.005	<.005
FEB 07...	<.002	<.005	.008	<.010	<.002	<.041	<.020	<.005	.021	<.003	E.003	<.005	<.005
MAR 28...	<.002	<.005	.013	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
APR 16...	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	<.005	<.005
MAY 23...	<.002	<.005	.055	<.010	<.002	<.041	<.020	<.005	E.004	<.003	<.006	<.005	<.005
JUN 26...	<.002	<.005	.011	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005
JUL 17...	<.002	<.005	.014	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.006	<.005	<.005
AUG 21...	<.002	<.005	.010	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.003	<.005	<.005
SEP 26...	<.002	<.005	E.005	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

DATE	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)
OCT 25...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
NOV 20...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
DEC 07...	<.021	<.020	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.001	<.006	<.002
JAN 04...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
FEB 07...	<.021	E.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.003	<.006	<.002
MAR 28...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
APR 16...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	M	<.006	<.002
MAY 23...	<.021	E.001	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.001	<.006	<.002
JUN 26...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
JUL 17...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.050	.017	<.006	<.002
AUG 21...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	E.009	<.006	<.002
SEP 26...	<.021	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002
DATE	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (UG/L) (04024)	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)
OCT 25...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
NOV 20...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
DEC 07...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011
JAN 04...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
FEB 07...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011
MAR 28...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
APR 16...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
MAY 23...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
JUN 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.015	<.004	<.010	<.011	<.023	<.011
JUL 17...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.005	<.004	<.010	<.011	<.023	<.011
AUG 21...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011
SEP 26...	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.003	<.004	<.010	<.011	<.023	<.011

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## NATIONAL WATER-QUALITY ASSESSMENT PROGRAM--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06329500 YELLOWSTONE RIVER NEAR SIDNEY, MT (LAT 47 40 42 LONG 104 09 22)

DATE	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- SUS- PENDEDED (T/DAY) (80155)
OCT 25...	<.016	<.034	<.017	<.005	<.002	<.009	4.33	27	470
NOV 20...	<.016	<.034	<.017	<.005	<.002	<.009	5.80	33	443
DEC 07...	<.016	<.034	<.017	<.005	E.002	<.009	4.56	36	585
JAN 04...	<.016	<.034	<.017	<.005	<.002	<.009	4.93	41	700
FEB 07...	<.016	<.034	<.017	<.005	E.001	<.009	4.87	20	396
MAR 28...	<.016	<.034	<.017	<.005	.007	<.009	4.32	432	8490
APR 16...	<.016	<.034	<.017	<.005	E.002	<.009	5.70	226	3510
MAY 23...	<.016	<.034	<.017	<.005	E.002	<.009	1.44	220	6710
JUN 26...	<.016	<.034	<.017	<.005	<.002	<.009	1.82	241	9240
JUL 17...	<.016	<.034	<.017	<.005	<.003	<.009	2.92	231	3810
AUG 21...	<.016	<.034	<.017	<.005	<.002	<.009	5.22	28	93
SEP 26...	<.016	<.034	<.017	<.005	<.002	<.009	4.42	49	455

E -- Estimated value.

M -- Presence verified, not quantified.

k -- Counts outside acceptable range (non-ideal colony count).

## WIND RIVER ECOLOGY STUDY

## YELLOWSTONE RIVER BASIN

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

06223750 -- WIND RIVER AB BULL LAKE CREEK, NR CROWHEART, WY (LAT 43 15 10 LONG 109 02 59)

DATE	TIME	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)	BED MAT. SIEVE DIAM. % FINER THAN (80173)	BED MAT. SIEVE DIAM. % FINER THAN (80174)
AUG 10...	0900	60	626	8.3	8.6	311	22.5	--	--	--	--	--	--
13...	1000	--	--	--	--	--	--	4	4	4	6	21	60

DATE

BED  
MAT.  
SIEVE  
DIAM.  
% FINER  
THAN  
128 MM  
(80175)

AUG  
10... --  
13... 94

431124108470101 -- WIND RIVER ABOVE PILOT WASTEWAY, NEAR MORTON, WY (LAT 43 11 12 LONG 108 47 01)

DATE	TIME	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)	BED MAT. SIEVE DIAM. % FINER THAN (80173)	BED MAT. SIEVE DIAM. % FINER THAN (80174)	BED MAT. SIEVE DIAM. % FINER THAN (80175)
AUG 06...	1130	7.6	8.2	8.6	232	23.8	--	--	--	--	--	--	--
11...	1530	--	--	--	--	--	7	7	9	22	45	70	97

431252108520501 -- WIND RIVER AT SWINGING BRIDGE, NEAR MORTON, WY (LAT 43 12 52 LOG 108 47 01)

DATE	TIME	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	BED MAT. SIEVE DIAM. % FINER THAN (80169)	BED MAT. SIEVE DIAM. % FINER THAN (80170)	BED MAT. SIEVE DIAM. % FINER THAN (80171)	BED MAT. SIEVE DIAM. % FINER THAN (80172)	BED MAT. SIEVE DIAM. % FINER THAN (80173)	BED MAT. SIEVE DIAM. % FINER THAN (80174)
AUG 08...	1745	150	625	7.5	8.2	177	21.5	--	--	--	--	--	--
08...	1810	--	--	--	--	--	--	5	6	9	15	30	50

DATE

BED  
MAT.  
SIEVE  
DIAM.  
% FINER  
THAN  
128 MM  
(80175)

AUG  
08... --  
08... 90

## ANALYSIS OF SAMPLES COLLECTED AT SPECIAL STUDY AND MISCELLANEOUS SITES

## WIND RIVER ECOLOGY STUDY--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

431320108535401 -- WIND RIVER AT US 26 BRIDGE, NEAR MORTON, WY (LAT 43 13 20 LONG 108 53 54)

DATE	TIME	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
AUG 07...	1200	3.8	626	7.8	8.6	167	22.8

431634109053701 -- WIND RIVER AB LITTLE SAND DRAW, NR CROWHEART, WY (LAT 43 16 34 LOG 109 05 37)

DATE	TIME	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
AUG 09...	0830	6.5	621	8.4	299	18.9	

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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

*Sea level:* In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.